

# Construction



MARCH 1951

Southern construction in the first two months of 1951 totals \$1,724,333,000, a figure that no other January-February combination even approaches. The total is two and one-quarter times larger than its 1950 counterpart.

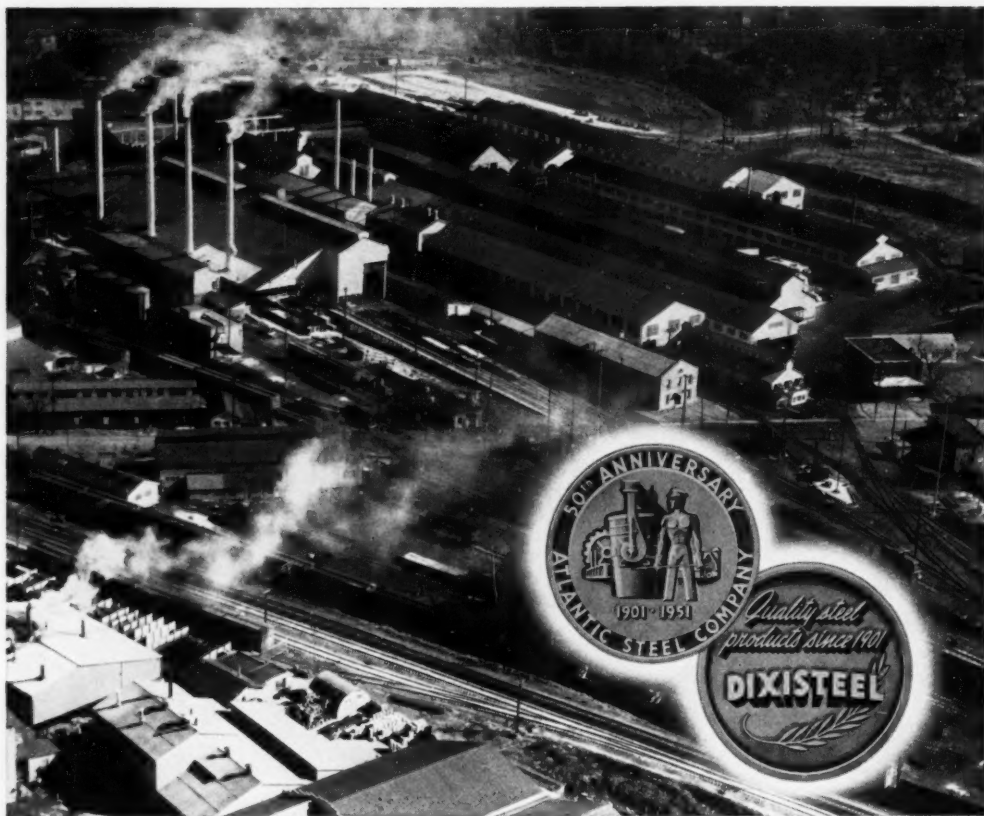
The two-month aggregate is made up of \$1,198,003,000 for industrial projects; \$221,448,000 for private building; \$137,355,000 for public building; \$85,452,000 for heavy engineering construction and \$82,075,000 for highways and bridges.

Value of contracts in February was \$641,867,000. While this is a decline from the all-time peak established in the preceding month, it is almost one and one-third times larger than the total for the comparable month of last year.

A breakdown of the February total shows \$377,384,000 for private industrial projects; \$81,475,000 for public building; \$76,777,000 for private building; \$59,667,000 for heavy engineering type construction, and \$46,564,000 for highways and bridges.

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Through all these years—through three major depressions and two World Wars—Atlantic Steel Company has been guided by firm business policies that have stood the test of time.

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## A.S.C.E. Holds Meeting at Houston, Texas

IRRIGATION tunnels, dredging, cableways, atomic disaster, expressways marine borers and radar were among the subjects discussed before American Society of Civil Engineers, which last month held its annual winter convention at the Rice Hotel, Houston, Texas.

Among the speakers were:

J. C. Bustamante, principal engineer of the Mexico section, International Boundary Commission;

M. P. Anderson; chief engineer, Brown and Root, Inc.;

Kenneth Heagy, chief of the engineering division of the Galveston District, Corps of Engineers;

J. G. Tripp, consultant on construction problems;

Commander James S. Marsh, Civil Engineering Corps, U. S. Navy, officer in charge of the Naval School for C. E. C. Officers;

W. J. Van London, Engineering-Manager, Houston Urban Expressway;

Admiral Joseph F. Jelley, Jr., chief of the Navy's Bureau of Yards and Docks; Herbert E. Hudson, head engineering subdivision, and

Glenn E. Stout and Floyd A. Huff, meteorologists, State Water Survey, Urbana, Illinois.

"In the lower Rio Grande Valley there are great areas of good agricultural lands. On the Mexican side of the river in the triangle Reynosa-Brownsville-San Fernando in the state of Tamaulipas, there are nearly a million acres of first class land," said Mr. Bustamante, who pointed out that the lower river annually flooded a 25,000 acre area close to the lower river leaving it "covered with a layer of fertile silt and well saturated with moisture."

Mr. Anderson revealed that construction of Baytown Tunnel at Houston required not only careful and exact planning, but an extra amount of real American ingenuity. For instance, the placing of a three-foot depth of base course upon which the sunken tunnel tubes would eventually rest, and screeding its surface required the development of a special type of floating equipment.

The special screeding rig consisted of an underwater steel screed suspended by cables from a traveling carriage mounted over two cylindrical pontoons 100-ft long to conform to the slope of the base course.

Concrete anchor blocks were placed on the trench bottom to fix the elevation of the rig while screeding. Cables between the anchor blocks and winches on the rig made it possible to submerge the pontoons sufficiently to overcome the effects of small waves, and changes in the tide. This method also made it possible to check the elevation of the rig and lower the screed accordingly.

Traversing winches, cable and anchors were provided to drag the screed back and forth as the fine gravel base course was placed by clamshell bucket. One setting of the screed could grade about 75-ft of the trench floor. About four or

(Continued on page 53)



**MARCH 1951**  
VOL. 18 NO. 3

**SAMUEL A. LAUER**  
Managing Editor

**WM. E. McCORD**  
Advertising Manager

PRICE — \$2.00 A YEAR  
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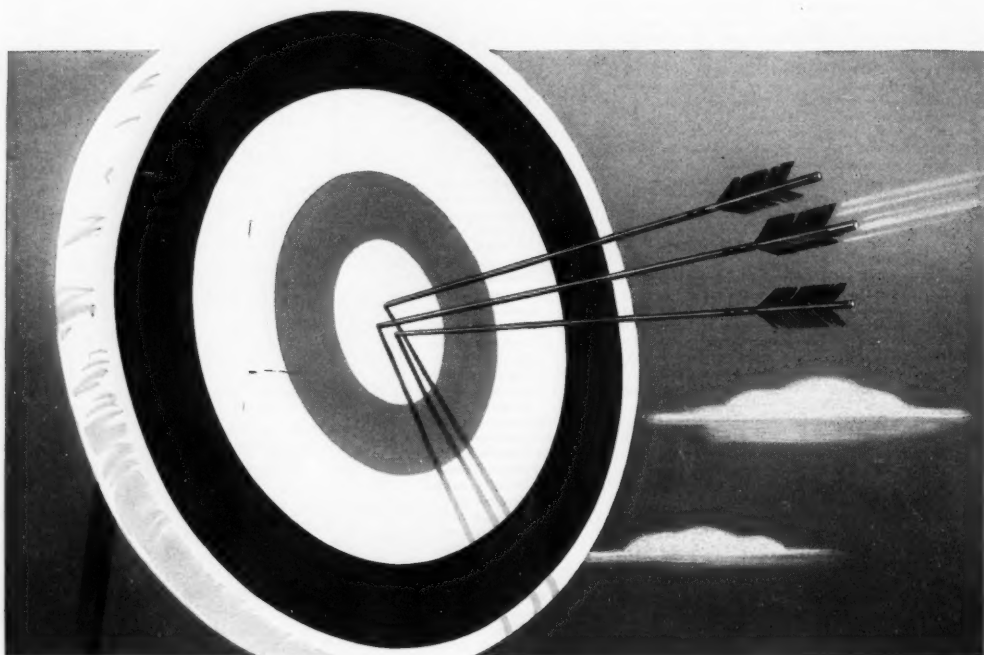
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(Photo by courtesy State News Bureau of North Carolina.)

Main mill building, Woonsocket Falls Co., Wilmington, N. C. Size 513 ft. x 610 ft. Engrs.-Archts., The McPherson Company, Greenville, S. C. Builders, McKay-Helgeson Company, Greenville, S. C. Steelwork fabricated at Roanoke Plant, Virginia Bridge Co.

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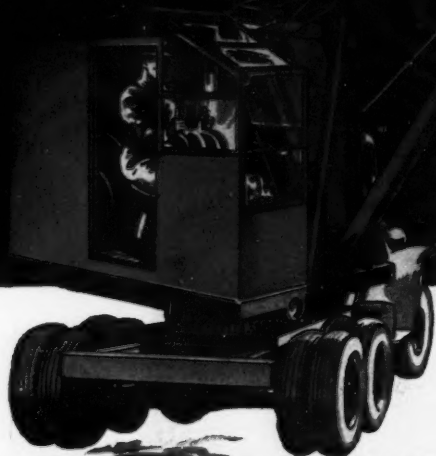
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"QUICK-WAYS" are designed for full truck speed, on or off the highway. Mounted on any standard truck, the working parts provide perfect operating *balance* for the truck shovel. All-steel construction gives built-in *strength* and *lightness* for maximum *capacity* and *stability*.

You get more utility out of a "QUICK-WAY" fully equipped, than any comparable equipment. Each "QUICK-WAY" is easily converted in minutes from SHOVEL to CRANE, DRAGLINE, CLAMSHELL, PILE DRIVER, SCOOP, TRENCH-HOE, BACKFILLER, etc. Buy only the attachments you want; your "QUICK-WAY" does more jobs better.

Parts are rugged and simple, requiring a minimum of servicing and having proved ability to take a life long beating. Many *interchangeable parts* and easy accessibility simplify maintenance and repair. From engine to attachment, every "QUICK-WAY" part will deliver its capacity rating and more.

The essentials built into every "QUICK-WAY" mean sure profits on a small investment; economical to buy, economical to use, it's one of the most useful machines you can own. There's a "QUICK-WAY" owner near you; ask HIM.

MODEL E: 4/10 cu. yd. capacity, mounts on standard 5-ton truck.  
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PIONEER IN POWER SHOVELS FOR TRUCK MOUNTING AND STILL THE LEADER

## Don't Let Wet Weather Stop Your Heavy Equipment Say LeTourneau Engineers

Inclement weather is one of the most important factors contributing to down time of heavy equipment. Equipment down for weather results in decreased production and increased costs, and can be the deciding factor as to whether the contractor makes or loses money on his job, according to engineers of R. G. LeTourneau, Inc.

Even small amounts of rain can force a contractor to cut his shifts. Continued rainfall over extended periods of time can temporarily close down the job or cause him to quit work entirely until underfoot conditions are dry enough to allow reasonable progress of work.

There are, however, several things the equipment operator can do to reduce weather down time and keep his equipment rolling throughout the rainy season. Here they are:

In anticipation of short wet spells or prolonged rainy weather, keep the haul road smooth. Use a dozer or scraper to fill in large holes or pockets that temporarily hold or impound water. Assure good drainage through the construction of adequate ditches and culverts. Keep constructed ditches and culverts clear of weeds, rocks, debris and other obstructions.

If it looks like it's going to rain, smooth up the fill, cut, borrow pit or haul road at the end of shift. This can be done easily with a scraper by dragging the blade on the return trip or by back-blading with a dozer.

Watch your drainage in the borrow area. Load downhill in the direction of lines of natural drainage. Keep the borrow area free of pockets or low spots that encourage ponding. Eliminate ruts by smoothing the borrow pit, or by going from the borrow to the haul road over different routes of travel.

Rooters are useful for securing bigger loads in the borrow or cut area. If conditions are wet or if it looks like rain, don't root material too far ahead of the scraper. Keep the area as solid as possible. Loose, rooted areas absorb water rapidly and get too wet to work. Settle for smaller loads rather than shutting down entirely.

For good drainage, keep cuts low at

the sides and high in the center. Good operators construct cuts in this manner primarily because it's the only right way to maintain proper slopes.

Keep the fill compacted as solidly as practicable. Do this by spreading the loads in thin, even layers. Compact by changing the path of travel of each load. For proper fill construction, build the fill so it's high on the shoulders and low in the center. During wet seasons, it's a good idea to level the fill and give it some crown for drainage at the end of the shift. Following the proper procedures before rain, can save a lot of job down time.

If working in rough, hilly country, it's easy to cut a few ditches with dozer or grader and thus keep water off the cut and fill.

Start back to work earlier after a heavy rain by putting available dozers to work a few hours ahead of other equipment. Use the dozer to skim off mud, drain and fill water holes and ponds. If there is a penalty existing against the job completion date, you can get to work faster by wasting, stockpiling, or spreading out to dry, mud or materials too wet to go on the fill. This material, if worth saving, can be picked up later a little at a time along with drier material. By doing this, too much wet material won't be placed in the fill at any one time.

Where showers have wet the top inch or so of the haul road, making it dangerous for rubber-tired units to work at top speed, pick up a load of sand or cinders or get some dry material out of the cut or borrow area and spread a thin layer over the haul road. If the haul road is too long to make this method practicable or if wetness has penetrated three or four inches below the surface, it can be scraped off with scrapers. Heavy grades on the average construction road get slippery faster and stay slippery longer. For best performance, reduce grades to a minimum. Slippage decreases travel speed, reduces the size of load that should be carried, makes for hazardous operation and can shut down the job altogether. Eliminate slippage and get top speed and higher yardage.

Soft spots in haul roads that bog down machines can be patched by mucking them out with the scraper or dozer and filling them with dry dirt from the cut.

Adjust tire pressures within recom-

mended load-carrying limits for best job operation. Lower air pressure and reduced speed can be used where underfoot conditions are soft, spongy and rubbery to extended depths, and where flotation would be of first consideration. Use higher tire pressures to cut through shallow mud to get to firmer footing.

These procedures will help keep equipment working in bad weather.

## Texas Receives \$5,963,622 In Low Road Bids

Low bids approximating \$5,963,622 were received February 20 and 21 by the Texas State Highway Department. Among them were the following:

Leon County—13,368 miles grading and structures: J. R. Canien and R. D. Kitchens, Austin, \$81,624;

Panola County—8,912 miles grading, structures, base and structures: Dew Construction Co., Tyler, \$156,397;

Hunt County—7.06 miles grading, structures, base and surfacing: R. W. McKinney, Nacogdoches, \$135,826;

El Paso County—346 of a mile grading, structures, concrete pavement and Main Street viaduct: Western Construction, Inc., El Paso, \$539,211;

Rusk and Panola Counties—8,276 miles flexible base and two-course surface treatment: R. C. Buckner, Jacksonville, \$112,096;

Angelina County—6,343 miles grading, structures and concrete pavement: Austin Road Co., Dallas, \$434,379;

Guadalupe County—264 of a mile, five bridges and incidental grading: Norman L. Larson, Austin, \$126,948;

Upton County—7,885 miles grading, structures, base and surfacing: M. E. Ruby and W. L. Barnes, San Marcos and Austin, \$74,488;

Caldwell County—5,162 miles grading, structures, base and surface: M. E. Ruby, San Marcos, \$54,193;

Henderson County—7,461 miles grading, structures, base and surfacing: R. N. Adams, Kaufman, \$94,264;

Grayson County—3,003 miles grading, structures base and surfacing: H. L. Butler and Son, Dallas, \$61,991;

Frio County—7,457 miles grading, structures, base and surfacing: Schwobe Brothers, San Antonio, \$56,044;

Bowie County—4,259 miles grading, structures, base and surfacing: McMillin-Burkett Construction, Texarkana, \$68,898;

Coryell and Hamilton Counties—14,891 miles flexible base and two-course surface treatment: Cage Brothers, San Antonio, \$149,649;

Gonzales, DeWitt and Lavaca Counties—12,770 miles seal coat: D & H Construction Co., Dallas, \$77,689;

Brewster County—38,866 miles seal coat: Hugh McMillan, El Paso, \$47,754;

Fort Bend County—4,361 miles grading, structures, base and surfacing: Brown & Root, Inc., Houston, \$72,366;

Presidio County—35,551 miles seal coat: Hugh McMillan, El Paso, \$27,491;

Dallam County—10,831 miles grading, structures, base and surfacing: Ernest Loyd, Fort Worth, \$158,484;

Hudspeth County—12,950 miles grading,

(Continued on page 14)

**Below—Start back to work earlier after a rain, using 'dozer to skim off mud, drain and fill water holes**



## Kaiser Announces Louisiana as Aluminum Plant Site

Kaiser Aluminum & Chemical Corp. has announced selection of the New Orleans, La., area as site for a new 200,000,000-pound-a-year aluminum reduction plant and power facilities.

Carrying out big-scale expansions to produce more aluminum for national defense and essential civilian requirements, Henry J. Kaiser, president, announced that Kaiser Aluminum will invest \$79,000,000—entirely privately financed—in the following program:

1. A reduction plant with four potlines, which will raise Kaiser Aluminum's capacity to a total of 540,000,000 pounds annually of aluminum pig, thereby boosting the Corporation's overall expansion in capacity since the Korean outbreak by 80 per cent. Construction will be rushed immediately.

2. A power plant at the New Orleans area site, to use natural gas as fuel in generating electricity, which is essential in large volume and at low cost to produce primary aluminum. United Gas Pipeline Co. has entered a long-term contract to supply the new operation with natural gas from the vast Gulf Area fields in amounts up to 70,000,000 cubic feet a day.

3. Open up bauxite properties in Jamaica to supplement its present source of the basic raw material from which alumina will be made to supply the new Gulf Coast reduction plant and also its two reduction plants in the State of Washington. Development of the new source of bauxite ore in Jamaica, within a short shipping haul of the Gulf Coast, will include mining operations and the providing of port and shipping facilities.

4. Expand the Kaiser bauxite plant at Baton Rouge, La., and make modifications to handle the Jamaican bauxite and to increase from 300,000 tons a year to 540,000 tons the production of alumina, the white powder chemical from which aluminum pig is produced. This will represent an 80 per cent increase in production at the Baton Rouge plant.

A 280-acre site for the new reduction and power facilities has been obtained on the Mississippi River, directly on deep water for ocean-going vessels. It is being bought from the New Orleans Terminal Co., a subsidiary of the Southern Railway within the New Orleans metropolitan industrial and population zone.

More than 1,000 persons will be directly employed at the reduction and power plants, and completion of the Baton Rouge plant expansions will bring employment there to approximately 700 employees, Mr. Kaiser stated.

Direct Kaiser payrolls in the New Orleans and Baton Rouge areas are expected to approximate \$6,000,000 a year, upon completion of presently projected expansions. Several million dollars annually will be spent in addition for purchases of supplies, transportation and other activities.

Crews of Kaiser engineers and production executives who have scoured the Gulf Coast area seeking the best combination of natural gas supply, water and rail shipping advantages, good employee and housing resources, and availability to markets, are ready to rush early construction. Equipment for both the reduction and power plants has been on order for some time.

Intense speed will be put into the project with the goal of starting the first production of aluminum pig in the latter part of this year and of having all four of the reduction lines in operation by the middle of next year, in order to meet mounting military requirements and the aluminum shortage.

Mr. Kaiser declared that Mayor DeLesseps S. Morrison and the Chamber of Commerce of New Orleans, headed by Joseph Rault, had led far-reaching cooperative efforts by state, civic, industrial and national leaders and officials over a period of weeks that culminated in the final selection of the New Orleans area over many factory sites surveyed. They marshalled economic facts and acted swiftly to aid Kaiser Aluminum to go ahead with the new facilities with all possible speed, in the interest of supplying critically needed additional aluminum for defense and essential civilian industries, Mr. Kaiser said.

Indicating the magnitude of the expansion project, Kaiser Aluminum's reduction plants at Spokane, Wash., and at New Orleans will be respectively the second and third largest primary aluminum plants in the United States and the third and fourth largest in the world. The new reduction plant is expected to be one of the most efficient and lowest operating cost aluminum plants in the country.

el Co., 2642 North Foster Drive, Baton Rouge, La., \$1,368; Combined low bid: \$9,288.

Madison—Furnishing bridge materials stock-piled at bridge site, State Project No. 352-02-01, Roundaway Bayou Bridge, State Route No. 1129, no bids received.

## Jefferson County Contractors Re-elect Incumbent Officers

The A.G.C. of Jefferson County, Texas, re-elected its officers in a recent meeting. G. Sargi, Beaumont, is president. A. L. Hay, Port Arthur is vice president and Jack King, Beaumont, is treasurer.

## Dallas Municipal Contractors Elect

F. S. Oldt, Dallas, was elected president of the Municipal Contractors Association at its fifth annual meeting.

A. J. McKenzie, San Antonio, was made vice president and L. H. Durst, secretary-treasurer. R. M. Dixon is the chapter's managing director.

The meeting featured an address by J. D. Marshall, assistant managing director of the national A.G.C., which dealt with the impact of current emergency defense measures. Members were told that the contracting industry must change as economic conditions changed in order to maintain efficiency.

## Ready-Mix Meet Urged to Start Emergency Upkeep

J. N. Bauman, vice-president-sales, of The White Motor Company, Cleveland, told members of the National Ready-Mixed Concrete Association, in convention at New Orleans that their industry can achieve greater efficiency under the nation's accelerated mobilization program by making sure its trucks are designed for time and labor savings and maximum payload. "The period just ahead, when trucks will be increasingly difficult to obtain, requires all of us to pay much more attention to keeping trucks in good working condition . . . to put truck maintenance on an emergency basis," he said.

## \$909,125 in Low Road Bids Received by Louisiana

Low bids received February 7 by the Louisiana Highway Department totaled \$909,125.83. Listed by parishes, they were:

Iberville—Furnishing creosoted timber piles and creosoted bridge timber stockpiled at various bridge sites, State Project No. 703-07-72. E. A. Callwell, Box 1327, Baton Rouge, La., \$27,160.25;

Calcasieu—11.296 miles of grading, concrete slab span bridges, small drainage structures, patching and widening existing concrete pavement, and bituminous surfacing of existing concrete pavement and existing brick pavement, State Project No. 3-04-24 and 3-05-10, Federal Aid

Project No. F.I. 35(21), Lake Charles-Iowa Junction Highway, State Route No. 2, Method 1: T. L. James Co., Ruston, La., \$856,837.15; Method 2: Sam Finley, Inc., 292 North Ave., Atlanta, Ga., \$772,823.70; Tangipahoa-St Tammany—12.674 miles of lateral roadway drainage, readvertisement, State Project No. 13-09-19 and 12-10-16, Hammond-Covington Highway, State Route No. 7, Bernard and Bryant, Contractors, Box 16, Covington, La., \$15,840.43;

West Baton Rouge—Furnishing washed gravel spot-dumped on certain public roads, State Project No. 703-07-73, Items 1, 3, 4, 5, 6 and 7; Hutson Sand and Gravel Co., 2130 Spain St., Baton Rouge, La., \$7,920; Item 2: Louisiana Sand and Grav-

## WANTED

**New D-7 Caterpillar Tractor**  
**\$1500.00 Cash Bonus**

**Also Require,**

**Used Late Model D-7 Tractor**  
**with Trackson Sideboom**

**LEE CONSTRUCTION CO.**

**P. O. Box 253, Houston, Texas**



*Me too.....*

**I've been drafted !**



Not by the Army, though . . . by **YOU!**  
And I'm going ahead full speed.

Your orders for Shell Brand have me working 24 hours a day, 7 days a week. And I feel mighty proud to have this responsibility in building South Texas.

So keep on giving me orders and I'll keep on making Shell Brand. Just one favor, though . . .

Please let me know sooner what your needs will be so we both can plan ahead more efficiently.

*Hardy Hal*



PORTLAND CEMENT COMPANY  
NAVIGATION BOULEVARD • CORPUS CHRISTI, TEXAS

# Going down to stay!

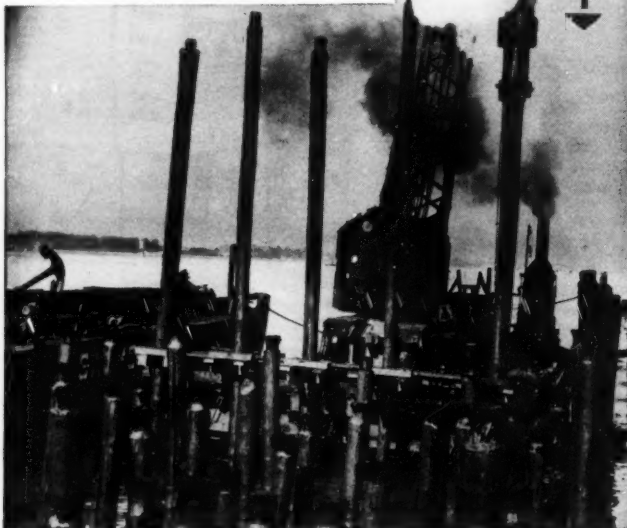
## THEY'RE KOPPERS PRESSURE-CREOSOTED PILES

● Never underestimate the damage that marine borers can do to untreated wood in salt water. In three to six months, they'll sometimes honey-comb untreated piles. In one year, they caused \$3,000,000 worth of damage in a single American harbor.

The 76-foot piles pictured below have been pressure-creosoted by Koppers. This treatment protects piles against marine borers and decay—the two greatest threats to useful service life. Thirty years from now, based on case histories of similar installations, these Koppers Pressure-Creosoted Piles will still be sound and serviceable.

For piers, wharves, groins, jetties, breakwaters—in fact, wherever water and construction meet—get the protection that Koppers Pressure-Creosoting Treatment provides. Koppers Treating Plants deliver pressure-creosoted piles on schedule... sizes up to 130 feet are available. Quotations gladly furnished.

**KOPPERS COMPANY, INC.**  
1919 Collingsworth St.  
Houston 10, Texas



Foundation piles being driven for the 150-foot extension of the U. S. Coast Guard pier at Charleston, S. C.

**KOPPERS**

**PRESSURE-TREATED WOOD**

## Texas Road Bids

(Continued from page 11)

structures, base and surfacing: Hugh McMillan, El Paso, \$92,264;

Brazoria County—5.562 miles grading, structures, base and surfacing: Southern Contracting, Austin, \$166,901;

McCulloch County—6.511 miles grading, structures, base and surfacing: J. W. Perry, San Antonio, \$51,048;

Hill County—4.972 miles grading, structures, base and surfacing: Ernest Loyd, Fort Worth, \$80,151;

Helphill County—2.099 miles Canadian River bridge and roadway approaches: Austin Bridge Co., Dallas, \$947,746;

Cooke County—3.866 miles concrete pavement: Harrison Engineering and Construction, Kansas City, Mo., \$520,307;

Mitchell County—11.920 miles grading, structures, foundation course and one-course surface treatment: Fred Hall and Son, Valley Mill, \$163,362;

Freestone County—500 of a mile, widening bridge and approaches: Russell Smith, Dallas, \$137,085;

San Augustin County—6.722 miles grading and small structures: W. R. Boyd, Cushing, \$121,163;

Franklin and Titus Counties—5.969 miles base and surfacing: L. W. Pelphrey, Gladewater, \$81,441;

Grayson County—FM1282, R1379-1-1, 2.903 miles grading, structures, base and surface: H. L. Butler and Son, Dallas, \$78,669;

Camp County—6.244 miles grading, structures, base and surface: Dave McCollough, Pottsburg, \$69,902;

Hansford County—15.93 miles grading, structures, base and surface: Cooper and Woodruff, Dallas, \$181,631;

Gonzales County—12.770 miles grading, structures, base and surface: D. R. Cloud and Son, San Antonio, \$180,406;

El Paso County—U.S. 80, C-101-12, 10.371 miles flexible base shoulders and hot mix A.C.P.: Hugh McMillan, El Paso, \$125,221;

Haskell County—8.740 miles grading, structures, base and surface: Stone Construction Co., Ardmore, \$72,452;

Hidalgo County—8.974 miles grading, structures, base and surfacing: E. B. Darby, Pharr, \$93,870.

## R. H. Hargrove Made New P. A. D. Deputy

R. H. Hargrove, president of Texas Eastern Transmission Corp., has been appointed acting assistant deputy administrator in charge of gas matters for the Petroleum Administration for Defense. Mr. Hargrove will serve in this capacity. Secretary of Interior Oscar Chapman announced, until a permanent organization for the Gas Industry in the National Defense Program has been formed, but not beyond April 1.

A former president and director of the American Gas Association, Mr. Hargrove has been prominent in the Natural Gas Industry for the past 20 years. Recently, he has been a member of the National Petroleum Council, oil and gas industry advisory group to the Interior Department.



Above—Halifax Paper Co. has signed a contract with Rust Engineering Co. for expansion of its Roanoke Rapids, N. C. plant, shown above. Included in the program is a new paper machine and paper mill.

## South's Construction Totals \$641,867,000 in February

**S**OUTHERN construction was valued at \$641,867,000 in February. The figure is a one hundred thirty-one per cent gain from the level for the comparable month of last year.

Construction in the first two months of 1951 totals \$1,724,333,000. No other January - February combination approaches that figure, which is two hundred twenty-five per cent larger than the value registered in the first two months of 1950.

The current year's February total is about forty-three per cent below the all-time peak established in the preceding month, when two huge atomic energy projects swelled the aggregate to its huge size. Declining residential construction was a contributing factor in this drop.

Private industrial projects, occupying a premier position, reached \$377,384,000 in February. The total was two hundred and thirty per cent higher than the \$120,619,000 reported for private industrial work in January.

Southern industry is experiencing a number of large additions, with chemicals, metals and textiles in the forefront. One project at Texas City, Texas, will cost \$30,000,000. Freeport and Velasco, in the same state are sites for others. Page-

dale, Mo. will become a center for manufacture of detergents through a \$5,000,000 expenditure.

The \$75,000,000 expansion of the South's largest steel mill at Baltimore ranks highest in its area. A \$10,000,000 steel mill is reported for Oneida, Tenn. A West Virginia project would cost \$7,000,000. Several expansions are going forward in Alabama. The Lone Star, Texas steel enlargement will cost many millions.

The aluminum industry is especially active. Huge projects are being started in the light metal field. Two new pot lines and other facilities are to be built at Port Lavaca, Texas. A plant is proposed in Arkansas. Another project—near New Orleans—will cost \$70,000,000. Previously published is a Corpus Christi plant to cost \$80,000,000.

Cement shortages have resulted in newly announced projects. The program of one company in Louisiana will cost approximately \$4,000,000. Twice that amount will go for a new Jacksonville, Fla. plant. Expansion in South Carolina will cost \$2,000,000. A large project in a related field is planned in Oklahoma.

Growth in the southern textile industry has been marked in the last few years, with work currently continuing. Among

the most recent announcements are a \$1,500,000 knitting mill at Belton, S. C.; \$2,000,000 Henderson, N. C. cotton mill expansion; a huge synthetic fibre plant at Decatur, Ala., as well as numerous others of lesser size.

Public building ranked next to industrial construction in value in February. The \$81,475,000 total was fifty-eight per cent above that for its counterpart of 1950 and forty-five per cent above the total for January 1951.

The public buildings figure embraces \$42,144,000 for government buildings and \$39,331,000 for schools. The former is one hundred twenty-nine per cent ahead of the value of the same type of work in February, 1950; the latter, eighteen per cent up. Compared with January, the figures are up fifty-four and thirty-seven per cent, respectively.

Private building in February amounted to \$76,777,000, a drop of forty-six per cent from the January value and of eighteen per cent from February of last year. The current total embraces \$59,558,000 for residential work, \$8,285,000 for office buildings, \$5,534,000 for assembly buildings, and \$3,400,000 for commercial structures. These latter are now under government restriction.

Engineering type construction more than doubled in February. The \$59,667,000 total is one hundred thirty-one per cent ahead of January and sixty-five per cent above the level for February of 1950. Included in the current total are \$44,796,000 for dams, drainage, earthwork and airports; \$12,455,000 for sewer and water work and \$2,416,000 for government electric projects.

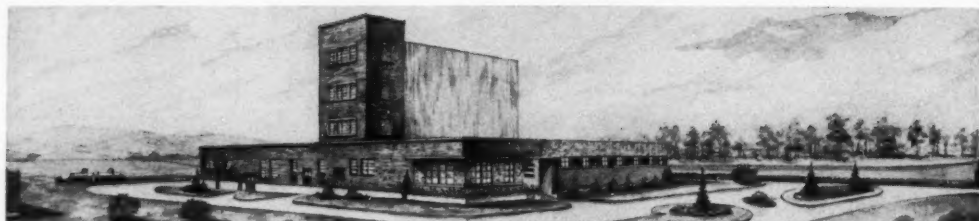
Dams, drainage projects, earthwork and airports are up four hundred ninety per cent, when compared with January; up eighty-three per cent above its 1950 counterpart. Sewer and water work is practically at the same level as January, the slight increase being about two per cent. Compared with February of last year, the current second month total is up forty-seven per cent.

Highway construction in the contract stage totaled \$46,564,000 in February. The figure represents an increase of thirty-one per cent above that for the preceding month. It is, however, twenty-three per cent below the total for February a year ago.

(Continued on page 16)

### SOUTH'S CONSTRUCTION BY TYPES

	February, 1951 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951	Contracts Awarded First Two Months 1950
<b>PRIVATE BUILDING</b>				
Assembly (Churches, Theatres, Auditoriums, Fraternal) . . . .	\$5,534,000	\$13,640,000	\$13,802,000	\$15,967,000
Commercial (Stores, Restaurants, Filling Stations, Garages) . . . .	3,400,000	2,674,000	17,801,000	16,497,000
Residential (Apartments, Hotels, Dwellings) . . . . .	59,558,000	50,929,000	170,606,000	132,226,000
Office . . . . .	8,285,000	20,335,000	19,239,000	11,907,000
	\$76,777,000	\$87,578,000	\$221,448,000	\$196,597,000
<b>INDUSTRIAL</b> . . . . .	\$377,384,000	\$272,537,000	\$1,198,003,000	\$71,046,000
<b>PUBLIC BUILDING</b>				
City, County, State, Federal and Hospitals . . . . .	\$42,144,000	\$59,389,000	\$69,389,000	\$28,640,000
Schools . . . . .	39,331,000	41,011,000	67,966,000	54,951,000
	\$81,475,000	\$100,400,000	\$137,355,000	\$83,591,000
<b>ENGINEERING</b>				
Dams, Drainage, Earthwork, Airports . . . . .	\$44,796,000	\$381,842,000	\$32,544,000	\$48,509,000
Federal, County, Municipal Elec- tric . . . . .	2,416,000	12,622,000	8,315,000	6,477,000
Sewers and Waterworks . . . . .	12,455,000	27,261,000	24,593,000	15,259,000
	\$59,667,000	\$421,725,000	\$85,452,000	\$70,245,000
<b>ROADS, STREETS, BRIDGES</b> . . . .	\$46,564,000	\$121,144,000	\$82,075,000	\$108,952,000
<b>TOTAL</b> . . . . .	\$641,867,000	\$1,003,384,000	\$1,724,333,000	\$530,431,000



Above—Architects drawing of the \$2,000,000 Nymoville plant to be constructed at Henderson, N. C., by Belding-Corticelli Co. McPherson Company, of Greenville, S. C., are the engineers and architects.

## South's Construction Totals \$641,867,000 in February

(Continued from page 15)

The January-February aggregate of \$1,724,333,000 is made up of \$1,198,003,000 for industrial projects; \$221,448,000 for private building; \$137,355,000 for public building; \$85,452,000 for engineering construction and \$82,075,000 for highway and bridge projects.

Fifty-eight per cent of the unprecedented industrial total represents the two atomic energy projects in South Carolina and Kentucky. The \$120,619,000 for private industrial work reported in January and the \$377,384,000 for similar projects in February complete the total.

Private building's \$221,448,000 two-month total is twelve per cent above the comparable period of 1950. The current figure embraces \$170,606,000 for residential work; \$19,239,000 for office projects; \$17,801,000 for commercial building and \$13,802,000 for assembly buildings such as churches and auditoriums.

Despite the drastic drop in residential work value in February, the two-month

figure of \$170,606,000 is twelve per cent above the value at this time last year. The \$19,239,000 for office buildings and \$17,801,000 for commercial buildings represent increases of sixty-one and seven per cent, respectively. Assembly building, value \$13,802,000, is down about thirteen per cent in the two months.

The \$137,355,000 accumulation for public building shows a sixty-four per cent increase. In the two months the value of government building and hospitals and for school building were almost evenly divided. The total for government building was \$69,389,000; for schools, \$67,966,000. Compared with the same period of last year both show increases, the one about one hundred forty-two per cent; the other, twenty-three per cent.

Heavy construction, such as dams and sewer and water work, also showed strength in the first two months. The \$85,452,000 total represents an increase of twenty-one per cent. Making up the figure are \$52,544,000 for dams, drainage,

earthwork and airports, \$24,593,000 for sewer and water work and \$8,315,000 for federal electric work. All show rises—the dam category, eight per cent; sewer-water work, sixty-one per cent, and government electric projects, twenty-eight per cent.

Highway and bridge projects in the January-February period total \$82,075,000, or about twenty-four per cent below such work in the same months of 1950. Texas and Florida vied for first place with \$14,288,000 for the former and \$14,436,000 for the latter. Practically all of the states have been active in this field, with four above the five million dollar mark, in addition to Texas and Florida.

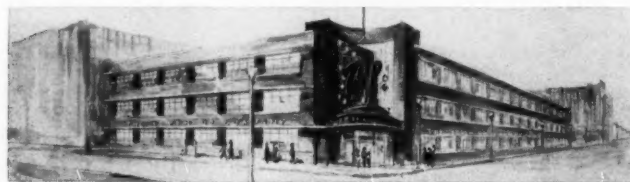
Construction put in place during February throughout the country was reported by the departments of labor and commerce at \$2,000,000,000, or twenty-two per cent more than the same month of last year.

Nearly all types of structures, those agencies said, are being built in larger volume than a year ago. This included homes, factories, stores, office buildings, churches and schools.

Total value of privately-financed construction put in place was \$1,545,000,000, or twenty-two per cent up when compared with its 1950 counterpart. Residential work was valued at \$854,000,000.

Commercial building was set sixty per cent above February, 1950. This will undoubtedly be slowed by the revision of Order M-4, which specifically singles out retail stores, shopping centers, filling stations, restaurants, hotels, loft and office buildings, bank and other credit institutions, as projects where National Production Authority sanction must be obtained. The picture is further complicated by a Federal Reserve limit on the amount of credit that can be extended on new commercial construction.

Confusion created by orders to curb or stop the several types of construction and to reduce civilian use of materials coupled with announcements such as that issued February 2 predicting possible controls on other materials, may result in reductions in fields other than where originally intended. An instance is the Mobile sugar refinery which is being held in abeyance "until conditions in the construction industry and the international



Above—Murch-Jarvis Construction Co., Inc., is contractor for the office building at St. Louis for the Seven-Up Co. Architect is Hugo K. Graff, also of St. Louis.

### SOUTH'S CONSTRUCTION BY STATES

	February, 1951	February, 1951	Contracts Awarded First Two Months 1951	Contracts Awarded First Two Months 1950
	Contracts Awarded	Contracts to be Awarded		
Alabama	\$38,754,000	\$39,052,000	\$97,456,000	\$13,243,000
Arkansas	8,675,000	9,789,000	13,950,000	9,380,000
District of Columbia	1,573,000	1,595,000	4,163,000	10,264,000
Florida	46,065,000	68,903,000	67,826,000	35,614,000
Georgia	12,800,000	113,736,000	25,132,000	18,694,000
Kentucky	11,348,000	7,371,000	362,925,000	4,560,000
Louisiana	124,002,000	130,230,000	144,933,000	55,360,000
Maryland	92,735,000	55,510,000	127,924,000	52,275,000
Mississippi	15,702,000	49,235,000	21,935,000	17,612,000
Missouri	17,095,000	53,903,000	69,224,000	21,480,000
North Carolina	10,356,000	18,674,000	33,023,000	23,316,000
Oklahoma	15,296,000	49,829,000	18,792,000	12,893,000
South Carolina	19,827,000	12,981,000	380,932,000	26,014,000
Tennessee	15,489,000	37,384,000	43,221,000	32,477,000
Texas	176,101,000	249,640,000	242,072,000	123,886,000
Virginia	31,358,000	78,261,000	44,282,000	70,541,000
West Virginia	4,723,000	26,990,000	26,523,000	2,750,000
<b>TOTAL</b>	<b>\$641,867,000</b>	<b>\$1,003,384,000</b>	<b>\$1,724,333,000</b>	<b>\$530,431,000</b>

(Continued on page 52)



# Mobilization and Materials Seen Factors in 1951 Construction Volume by A.G.C.

THE volume of construction in 1951 is uncertain because of the mobilization program and availability of materials, according to the annual report of the Associated General Contractors of America, which last month held its thirty-second annual convention in the Hotel Statler at Boston.

H. E. Foreman, managing director of the contractors' organization, said there is reason to believe that the competition prevailing for the smaller number of projects now coming up will continue to reflect economy in defense and other similar projects.

Mr. Foreman forecast a shortage of certain types of equipment. Military purchases are being contemplated that will take a substantial part, if not all of some sizes of earthmoving machinery. The picture is further complicated by inadequate supplies of materials.

While the construction industry has suffered much from government action to control real estate credit and prohibit new projects, Mr. Foreman believes that much of the loss in volume will be offset by new defense projects and facilities to increase productive capacity.

During 1950 the construction industry established an all-time record of nearly \$28,000,000,000 in new construction "put-in-place" and about \$8,500,000,000 in maintenance and repair operations, with only a small part of the total going for direct defense work.

Most general contractors, it was revealed, are now busy completing projects started last year. In some areas, defense or industrial construction is not expected to take up the slack when current work is finished.

The contractors were not optimistic about prospects for an increase in their field. In fact, the largest unused capacity exists there. Materials containing metals were reported becoming scarcer and deliveries slower.

Walter L. Couse, of Detroit, presided during the convention, assisted by Glen W. Maxon, of Dayton, Ohio, who succeeded to the presidency at the conclusion of the sessions.

Reviewing the year during which he held office as president of the national contractors' organization, Walter L. Couse said that competition during the first quarter "at times was almost ruinous."

He observed that A.G.C. members reacted in every favorable way as they sought new economies and developed still greater efficiencies to offset as far as possible the low prices.

Despite the large increase in manufacture of construction materials and equipment and increased supplies of basic new materials, there "developed many items in terrifically short supply with increased costs for those available." The problem is continuing and shortages are becoming

more aggravated and severe in face of the defense program.

Because of defense construction he expects some areas will be left "rather dry of work and others competing for both men and materials. It will mean a migration of workers and many substitutions of materials in short supply."

Close cooperation will be required between all branches of the industry from designer through the contractor, supplier, equipment men and labor toward realized economy, efficiency and the materials to accomplish the nation's defense needs, Mr. Couse pointed out.

Ralph K. Stiles, head of the Construction Industry Manufacturers' Association and executive vice-president of Austin-Western Co., declared that shortages of critical materials, principally steel were seriously hampering manufacturers of construction equipment in supplying contractors with "the tools of their profession."

"Controls are beginning to tighten now," he said, and "a great many manufacturers in our industry are actually faced with a slowdown or a possible shutdown due to their inability to obtain sufficient materials," with some forced to purchase in the grey and black markets, others importing from Europe at prohibitive costs in the effort to keep going.

The answer to the problem, Mr. Stiles emphasized, "is a controlled materials plan and until we get it we will remain in a state of utter confusion. The earliest effective date I have heard offered for such a plan is July."

The opening general session was held the afternoon of Monday, February 26. Following the invocation and welcomes, Mr. Couse delivered the president's address. He was followed by Managing Director H. E. Foreman, Washington, D. C., who presented his report.

Following speakers were presented: Daniel L. Marsh, retiring President of Boston University, whose subject was "Foundations of the Republic."

Wesley F. Rennie, Executive Director, Committee for Economic Development, New York, whose subject was "Economic Policy for Mobilization."

Millard F. Caldwell, Jr., Administrator, Federal Civil Defense Administration, Washington, D. C., who spoke on "Organization for Civil Defense."

Problems of the construction industry under the nation's mobilization program were considered at the general session Tuesday morning.

Frank R. Creedon, Assistant Administrator for Facilities and Construction of the National Production Authority, Washington, D. C., who spoke on "Controls Affecting Construction."

Ralph K. Stiles, president of the Construction Industry Manufacturers' Association, and executive vice president of the Austin-Western Co., Aurora, Ill.,

spoke on "Outlook for Construction Equipment."

Milton Rosen, president of the American Public Works' Association, and Commissioner of Public Works, City of St. Paul, Minn., who spoke on "A Public Official Views the Contractors' Position Today."

Reports were given by chairmen of the association's committees as follows:

Labor Committee, by Lester C. Rogers, Chicago.

Apprenticeship Committee, by Rudolph W. Weitz, Des Moines, Ia.

Accident Prevention Committee, by H. B. Alexander, Harrisburg, Pa.

Major defense construction programs were explained at the Wednesday morning general sessions. Addresses scheduled were:

Maj. Gen. Lewis A. Pick, Chief of Engineers, Department of the Army, Washington, D. C., "The Current Program of the Corps of Engineers."

Rear Adm. J. J. Jelley, Chief, Bureau of Yards and Docks, Department of the Navy, Washington, D. C., "Navy Shore Support Today."

James A. Anderson, president of the American Association of State Highway Officials, and Commissioner, Virginia State Department of Highways, Richmond, Va., "The Importance of the Nation's Highways."

Joseph D. Keenan, secretary-treasurer of the Building and Construction Trades Department of the American Federation of Labor.

Reports were given by chairmen of the association's committees as follows:

Governing Provisions Committee, Past President M. W. Watson, Topeka, Kans.; Contract Forms and Specifications Committee, by Leo P. Richardson, Detroit;

Market Development Committee, by George Heller, Minneapolis;

Public Relations Committee, by A. N. Goldberg, New Orleans;

The Thursday morning general session was devoted to association business. Reports by committee chairmen were as follows:

Membership committee, by Fred I. Rowe, Columbus, Ohio;

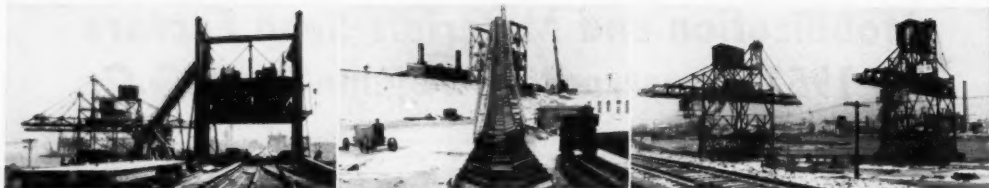
Finance Committee, by Adolph Teichert, Jr., Sacramento, Calif.;

Tellers Committee, A. E. Budell, N. Y.;

Resolutions Committee, by Mr. Rowe. Secretary-Treasurer William Muirhead, Durham, N. C., presented his report.

Installation of Mr. Maxon as president of the association for 1951, and Arthur S. Horner, Denver, Colo., as vice president, concluded the session.

The convention closed with the annual banquet, at which the toastmaster was Mr. Richardson. The association's past presidents in attendance were honored, and there were brief speeches by the retiring and new presidents.



Above—Left—The 500-ton discharge bin built as part of the \$5,000,000 B. & O. ore pier at Curtis Bay, Baltimore. Middle—Idlers upon which the 48-inch conveyor belt will operate at 400 feet a minute. Right—The two unloading towers which each have a capacity of 1,500 tons of ore an hour.

## \$5,000,000 B. & O. Ore Pier Nears Finish at Curtis Bay, Baltimore

**T**HE new \$5,000,000 pier being constructed at Stone House Cover, on Curtis Bay, South Baltimore, will be finished early in April, according to officials of the Baltimore & Ohio Railroad.

Designed to handle iron ore imported from Liberia, on the west coast of Africa, and from newly opened deposits in Venezuela, the pier is equipped with two unloading machines, each with a capacity of 1,500 tons of ore an hour.

The pier itself is 650 feet long and 81 feet wide. A 48-inch wide conveyor belt capable of operating at 400 feet a minute will receive the ore from the unloaders and carry it to a 500-ton discharge bin, where it will be dropped in waiting railroad cars.

Construction was started fourteen months ago by Empire Construction Co. Z-shaped steel sheet piling (Carnegie-Illinois) is tied back with two-inch steel rods on six-foot centers anchored into concrete anchor logs which are supported on piles.

The fill behind the sheet piling was topped with granulated slag. Foundations for the crane runways are concrete, supported on fluted piles (Union). More than 600,000 cubic yards of dredging was done by the Arundel Corp. to provide a channel for vessels with a 35-foot draught to the new facility.

Each of the two man-trolley unloaders, which were manufactured by the Dravo Corp., is equipped with a 15-ton ore bucket for "cut-down" or "free-digging." Smaller buckets—seven and one-half and four and one-half tons—are to be installed for clean-up and special

work.

The buckets will dump into receiving bins on each machine, passing through feeders to the conveyor which inclines to the discharge bin built over railroad tracks on an inshore elevation. Electrical hoppers weigh the ore as it drops into the gondolas.

The pier will berth one vessel, although its length can be extended to 1,250 feet, thus providing for simultaneous berthing two ore carriers. Two unloaders will be added if this extension is made. Currently installed towers are 133 feet above low water. Crane rails are up 67 feet. The steel work was done by American Bridge Co.

Railroad cars will be pushed under the loading hoppers and to the outbound tracks by electrical pushers. The flow of ore to the discharge bins will be regulated by automatic and semi-automatic controls and limit switches, all electrically operated.

Studies show that in handling the cargo of a 22,000-ton vessel 367 cars will be loaded in 24 hours at the rate of one car each three minutes and 55 seconds. Altogether, this will be almost six trainloads. For a 40,000-ton cargo, the number of cars is 667 in 24 hours, averaging two minutes and 10 seconds a car. This represents more than 10 trainloads.

Three buildings were erected. These are a 42 by 50-foot brick substation, a 40 by 80-foot service building and a 50 by 80-foot maintenance building, both of concrete block construction. The first two were by Lacchi Construction Co., the third, by B. & O. forces.

will use the Mathieson Stationary Mercury Cell process in which the brine pumped from the wells is broken into its component elements, sodium and chlorine, by passing a direct current through it in a specially designed electrolytic cell.

All of the chlorine and caustic production of the new company is expected to be consumed in the Gulf Coast area where defense demands for both products have increased substantially.

The new corporation's plant will be built by the chemical plants division of Blaw-Knox Construction Co., Pittsburgh, Pa. Electricity will be supplied by the Alabama Power Co.

Mathieson officials estimate that the plant will require approximately 100 employees when in full operation.

Officers of the new corporation are Thomas S. Nichols, president; John C. Leppart, executive vice president; C. F. Prutton, vice president; Stanley de J. Osborne, treasurer; J. V. Joyce, controller, and R. I. Galland, secretary.

Mathieson Chemical Corp., Baltimore, Md., is one of the largest manufacturers of industrial and agricultural chemicals in the United States with assets of over \$137,000,000 and 14 plants, located from Niagara Falls, N. Y., to Houston, Tex., producing basic chemicals and allied products.

Chlorine is a basic chemical necessary in the production of magnesium, cotton lint for gun cotton, aluminum chloride for catalyst in the manufacture of styrene, aviation gas, organic chemicals and metal refining, synthetic rubber, carbon tetrachloride, chlorinated paraffin, naphthalene and rubber, chlorinated benzenes, tetraethyl lead, glycols, synthetic glycerin, trichlorethylene, perchlorethylene, military smokes and gases, refrigerants, paint stripping chemicals, fungicides, insecticides, phenol, plastics materials, organic solvents, synthetic detergents, oil additives, miscellaneous organic and inorganic chemicals, water and sewage treatment, refining of metals, such as arsenic, antimony, cobalt, lead and tin, bleaching of paper and textiles, and many smaller but very important uses not stated above.

Caustic soda is also one of industry's most essential basic chemicals for the manufacture of rayon, regular and aviation gasoline, soap, reclaimed rubber, vegetable oils, cellulose film, detergents of all kinds, explosives, nonferrous metals and a wide variety of chemicals and pharmaceuticals.

Capt. Stuart Farrar Smith, retired Navy civil engineer corps officer, died last week at the Emergency Hospital in Washington.

### Mathieson Subsidiary Plans Plant near Mobile

Mathieson Alabama Chemical Corp., a new, wholly owned subsidiary of Mathieson Chemical Corp., will build a chlorine and caustic soda plant near Mobile, Ala., according to Thomas S. Nichols, president of both organizations.

Chlorine and caustic soda, two important basic chemicals, are both in short supply and are vital to the expanded mobilization program. Both are now under inventory control orders by the Government and a limitation order on the use of chlorine was recently issued by

the National Production Authority.

Engineering has been completed for the new plant which will be located on a 500 to 1000-acre site at McIntosh, in the southern part of Washington County, approximately 40 miles north of Mobile. The new company plans to utilize salt from the McIntosh salt dome to supply salt brine, a necessary raw material for the manufacture of chlorine and caustic soda. Preliminary drilling operations for salt have already been carried out on the dome.

Expected to be in operation by early 1952, the new plant, the first development by Mathieson in the Mobile area,





**PULLING A 17-YARD SCRAPER**, the TD-24 moves more paydirt in a faster time cycle to keep Highum and Wondra ahead of the contract time clause on Minnesota State Aid Road Number 9, near Clinton Falls, Minnesota.

**IT'S "THE CHAMP"**—the big red International TD-24 —and here's what R. E. Highum says about it: "The easy quick-starting engine gets our equipment working sooner each day. Over a period of time that means a lot more profit for us. Economy in fuel, lubrication, and repairs is good. International parts delivery and service are tops."



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How one contractor  
closes the work-gap  
with the TD-24

Up in the land of ten thousand lakes, the International TD-24 is doing a job of moving paydirt that would make any contractor sit up and take notice.

Highum and Wondra, Blooming Prairie, Minnesota, on a state road improvement contract, are a hundred percent for International—and here's why:

**The TD-24 on the job rolled up 1,500 hours its first year with no downtime and not a cent for repairs.**

**Quick, all-weather starting—with International's exclusive push-button, gasoline-conversion starting system—gets equipment working sooner each day—doubly important where the snow flies early and stays late.**

**TD-24 hauls a bigger payload with a shorter time cycle—does more work with more speed.**

**Synchromesh transmission—you shift "on-the-go."**

**Planet Power steering with finger-tip control for pivot turns, feathered turns, turns with power on both tracks.**

**Reserve engine torque control—gives more lugging ability and increased drawbar pull for overloads.**

**Power—TD-24 delivers 148 maximum horsepower at the drawbar.**

Ask the superintendents and the "skinners" on any TD-24 job. Ask to take the controls yourself. Then let your International Industrial Distributor show you what's in the TD-24 for you. You'll be a TD-24 man from then on in.

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS



**INTERNATIONAL CRAWLERS MAKES SNOW TRAPS**—deep snow ditches to keep the highway from drifting over in winter. A TD-9 and two TD-18's are on this job. One TD-18 has 4,500 hours in three years, the other has 9,600 hours in four years!



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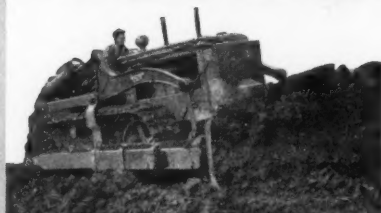
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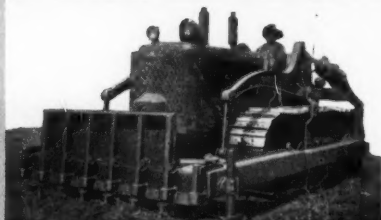
**Dozer-Shovels** 3/4 and 1-cu. yd.



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**Bulldozers & Bullgraders** Hydraulic and Cable



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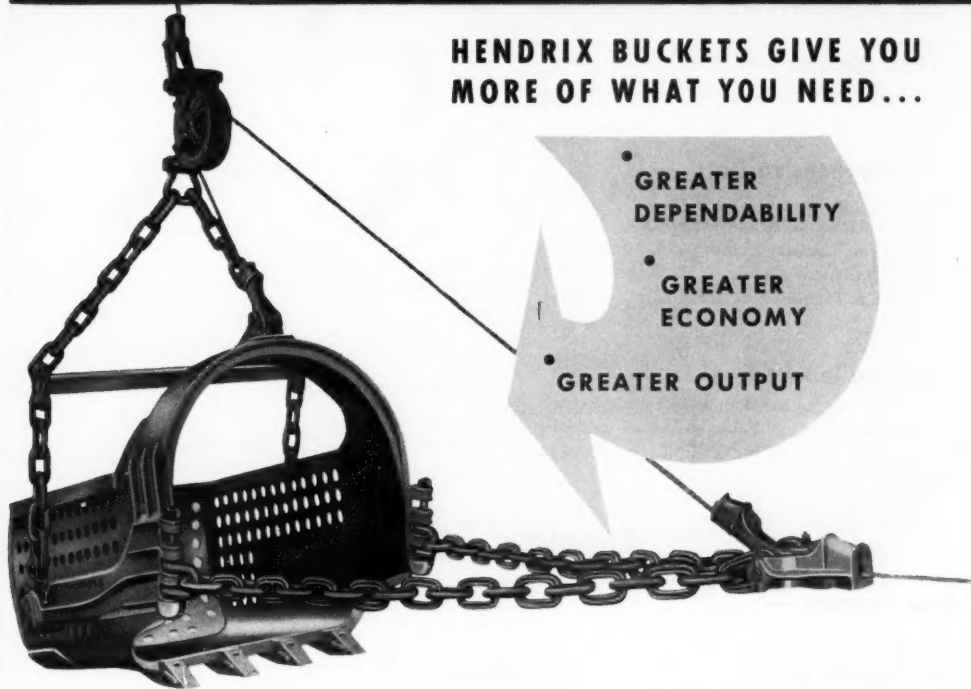
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for the proved P&H method of Stabilization**

Road builders asked for this new P&H Soil Stabilizer . . . to handle smaller jobs, such as streets, alleys, taxiways, parking areas, airports, sub-bases.

Now, it's ready . . . to bring you all the advantages . . . the same quality controls P&H Soil Stabilizers have proved on jobs all over the country. It's the most practical and economical method of soil stabilization ever developed.

The P&H Model EA-56 is readily maneuverable, easily transported. It performs all of the 8 basic requirements in a *single pass*, processing in 5 ft. strips. Fully controlled by one operator. Operating at a good rate of speed, it cuts time and

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MARCH, 1951

25



**Above—**Many guests prominent in both local and state engineering, civic and construction circles were present at the annual luncheon-meeting held last month by the Maryland Highway Contractors Association.

**Above—At left,** Thomas D'Alesandro of Baltimore, with a group of Maryland engineers. **Left to right are:** Arthur W. Tayman, Prince Georges County engineer; Mayor D'Alesandro; William Fannon, local sanitation engineer; J. Neil McCardell, comptroller of the City of Baltimore; Paul A. Cohen, Baltimore building inspection engineer. **Back row,** Chris J. Lortz, of the local highways department; James M. McKay, Baltimore highways engineer; George A. Carter, deputy director of public works, and Walter C. Hopkins, deputy chief engineer of the State Roads Department.

**Middle photo—Above—**F. Talbott Gatch, president of the Maryland Highway Contractors' Association, was master of ceremonies. **At his right are** Russell H. McCain, chairman, and W. F. Childs, Jr., chief engineer of the Maryland State Roads Commission; **at his left,** Leonard Kolmer, roads commission member; John B. Funk, Baltimore county engineer.

**Right photo—Above—**Group of representatives of construction equipment firms. **Seated, left to right, are:** Bill Berry of Elphinstone, Inc.; Steve O'Connell and Kinsey Owens, of Chesapeake Supply & Equipment Co. **Standing, left to right, are:** Tom Evans and Cecil Russell, of the Chesapeake company; Frank Gatch, of Paving Supply & Equipment Co.; L. Phillips, of John C. Louis Co., Inc., and Ridgeley Frye, of Free State Equipment Co., Inc. Mr. O'Connell was the head of the arrangements committee.

## Maryland Highway Contractors Hold Annual Luncheon-Meeting

**T**HE Maryland Highway Contractors' Association held its annual luncheon-meeting February 28 at the Park Plaza Hotel, Baltimore, with three hundred or more members and guests—some from as far as Salisbury on the eastern shore and from Cumberland in the western part of the state and from West Virginia participating in the five-hour program.

Guests included prominent personalities in both local and state affairs, led by Mayor Thomas D'Alesandro and Comptroller J. Neil McCardell, both of Baltimore; Secretary of State John Reeves, who represented Gov. Theodore R. McKeldin, and Russell H. McCain, chairman, and Leonard Kolmer, member of the Maryland State Roads Commission.

Figures high in Maryland public engineering circles were also feted. Paul L. Holland, director of public works of Baltimore, and W. F. Childs, Jr., chief engineer of the State Roads Commission, shared honors in this group, with Nathan L. Smith, understood to be appointee to Maryland's top building engineering position.

F. Talbott Gatch presided at the speakers' table as president of the Highway Contractors' organization. With him were two of the association's past presidents—John D. Sheetz, of the contracting firm bearing his name; Pete Burroughs, of Hannaman-Burroughs Co., contractors of Salisbury—and Maj. Herschel Allen, executive of J. E. Greiner Co., consulting engineers on the \$44,000,000 Chesapeake Bay Bridge.

Baltimore County's new chief engineer, John Funk, who recently retired as state building engineer, also was present at the table of honor, as were Walter C. Hopkins, deputy chief engineer of the Maryland State Roads Commission; George A. Carter, deputy director of public works of Baltimore, and James H. McKay, city highways engineer; Delegate James J. Duffy, of the Maryland Legislature; C. R. Pease, secretary of the Roads Commission, and John H. Ensey II, the association's secretary.

Chairman McCain delivered the main address, revealing that the Maryland State Roads Commission this year will

be able to advertise between thirty million and thirty-five million dollars' worth of work. He expects approximately the same program for the 1952 construction season.

Citing the advances made on Maryland highways in the last few years, he said value of the entire state highway system in 1941 was \$216,000,000. In the period from 1947 through 1952, the State Roads Commission will have made expenditures almost equal to that figure.

The program carried out since Mr. McCain has been on the Commission—he was a member prior to elevation to the chairmanship—started practically from scratch in 1947 when work approximated nine million dollars. This accelerated to an all-time peak of \$55,000,000 in 1949. The total under contract in 1950 dropped to \$41,000,000.

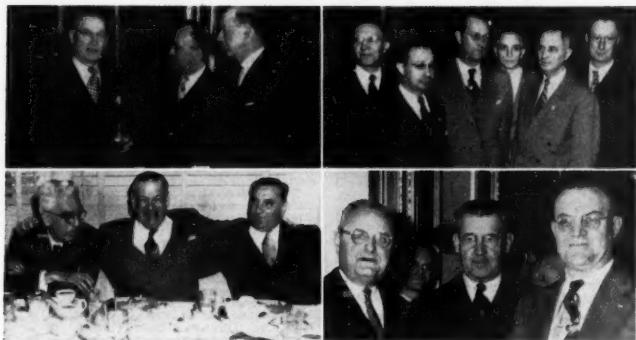
Ten to twelve million dollars worth of construction is unadvertised, the Roads Commission Chairman pointed out, and is being held in abeyance for action in the spring season. Eighty-million dollars worth of work was carried into 1951. Of

**Below—Left photo—Left to right:** Walter C. Hopkins, state roads department deputy chief engineer; Paul L. Holland, director of public works of Baltimore; Nathan L. Smith, who is scheduled to assume Maryland's top building engineer post. **Middle—**Russell H. McCain, chairman of the Maryland State Roads Commission, who talked on the large program to be continued this year by his department. **Right photo—**Group at the speakers' table, including, left to right, Mr. McCain, Mr. Childs, John D. Sheetz, highway contractor and immediate past president of the Maryland Highway Contractors Association; Herschel Allen, head of the J. E. Greiner Co.; C. R. Pease, secretary of the State Roads Commission; John Reeves, Maryland secretary of state, who represented Gov. Theodore R. McKeldin, and John H. Ensey II, of the Ensey contracting company, who also is secretary of the host organization.





Above—Left photo—Typical table group at the Maryland Highway Contractors' affair. Left to right are W. W. Gwathney, Robert Sparkes, J. W. Packman, S. T. Dunn, Jean Norris, J. P. Keeley, Joe W. Jones, Pat S. Tobin and H. W. Grell. Mr. Keeley is a member of a West Virginia contracting firm. Others are from the Baltimore and Ohio Railroad and Empire Construction Co. Middle photo—Above—Nathan L. Smith, Maryland building engineer appointee. Right photo—Above—James H. McKay, Baltimore municipal highways engineer, pictured with some of his staff. Front row, left to right are: Guy S. Shipley, Tom Gaffney, Mr. McKay, G. V. Walters. Back row, left to right are: Albert C. Gronert, Russell P. Tittle, M. Willis, Chris J. Lortz, A. J. Donnelly, H. D. MacDonald, Dave Marley and W. L. Smith. W. L. Chilcote, deputy highways engineer was not present at the time.



Above—Top left photo—Left to right, F. Talbott Gatch, of T. B. Gatch & Sons, Inc., and head of the Maryland Highway Contractors' Association, chats with Leonard Kolmer, member, and L. H. Steuart, retired secretary of the State Roads Commission.

Right—top photo—Left to right, Joseph W. Jones, regional engineer for the Baltimore & Ohio Railroad; Paul A. Cohen, Baltimore building inspection engineer; Arthur W. Tayman, Prince Georges County Engineer; W. L. Chilcote, Baltimore deputy highways engineer; Paul L. Holland, director of public works of Baltimore, and J. E. Woods, materials engineer for the Maryland State Roads Commission.

Lower left photo—Left to right, John H. Ensey, of the Baltimore contracting firm bearing his name; Robert M. Reindollar, former chairman of the Maryland State Roads Commission; George Langenfelder, head of C. J. Langenfelder & Sons, Inc.

Lower Right photo—Left to right, Rolph Townshend, Chestertown district engineer for the Maryland State Roads Commission; Ed H. Nunn, of E. Nunn Construction Co. and vice president of the contractors' association, and Charles E. Kern, of the firm which bears his name.

this \$46,000,000 worth is yet to be completed.

Mr. McCain emphasized his appreciation for the cooperation of the highway contractors of Maryland and also lauded the engineers and others of the State Roads Commission who have helped make the program click. He expressed the belief that the fine work and co-operation will continue and that not too long in the future Maryland will have one of the best systems in the country.

Mr. Holland predicted that the Baltimore program will be as large as possible in the next three years. Referring to the rehabilitation of the 410 miles of local streets at a cost of \$12,500,000, he declared that local authorities believe they

have done what the people wanted.

Two projects top the list in the current year's program in Baltimore. To be constructed under a \$4,000,000 fund now available. They are the O'Donnell Street project and one at Hilton, Caton and Frederick avenues.

The city also plans to start work on the Edmondson Avenue and Hilton street grade crossing. Several projects on the second leg of the expressway are scheduled. These are at Russell street over the Baltimore and Ohio tracks and to carry Monroe Street over the same railroad.

Approximately \$800,000 in "builders" streets are scheduled. A number of roads and bridges are to be relocated in Carroll

and Baltimore counties in connection with the proposed Patapsco River water dam and reservoir. Cost is placed at \$5,000,000.

Major Allen recalled when there were but a handful of "oldtimers" at such a luncheon, also pointing out that Maryland's largest bridge is progressing rapidly toward completion.

Mayor D'Alesandro, Mr. McCardell, Mr. Smith and Mr. Kolmer extended short greetings. Mr. Funk, who succeeded Mr. Smith as chief engineer of Baltimore County, said his new charge needs a lot of work and he hopes to get a lot done. He described the county as a leading county of Maryland.

## Texas Puts 10,000th Mile of Farm-to-Market Road Under Traffic

The State of Texas recently completed and placed under the wheels of traffic the ten thousandth mile of farm-to-market road, it was announced last month by the State Highway Department.

State Highway Engineer D. C. Greer said the ten thousandth mile was on FM 1402, in Titus County. The road runs seven miles from Midway to Mount Pleasant.

Mr. Greer said that all 10,000 miles of new farm roads have been developed within the last few years, much of it under the stimulus of the recent State farm road bill. The Midway-Mount Pleasant road was financed by this legislation.

The Texas Highway Department is now contracting rural roads at the rate of 3,500 miles per year, Engineer Greer stated.

He expressed concern that the maintenance of the new farm roads may run higher than originally planned because, in many instances, more trucks are adopting the farm roads for short cuts or to avoid dense traffic.

"These roads were designed to give the farming and ranching areas economical all-weather facilities," he said. "They cannot withstand super-heavy, non-agricultural traffic without increased maintenance costs."

# Southern Construction Projects

## ALABAMA

**ALEXANDER CITY**—City let contract to B & R Construction Co., Birmingham, Ala., \$386,513, for natural gas system.

**ANNISTON**—City Board of Education let contract to Andrew Dawson & Sheneay, \$333,000, for addition to Cobb High School.

**ANNISTON**—City Board of Education received low bid from Andrew Dawson & Sheneay, \$335,626, for addition to Cobb Ave. High School.

**ANNISTON**—U. S. Engineer Office, Mobile, plans repair shop building and parking area, Alabama Ordnance Depot, \$3,500,000.

**ATLANTA**—Alabama Polytechnic Institute received low bid from J. A. Jones Construction Co., Atlanta, Ga., \$1,959,250, for women's dormitory.

**BIRMINGHAM**—Lynn Strickland received low bid from Consolidated Building Corp., \$147,034, for 16-unit apartment building, Mountain Brook.

**BIRMINGHAM**—Woodward Iron Co. plans 30 new coke ovens and other additions to plant, \$3,600,000.

**BIRMINGHAM**—Try-Me Bottling Co. received low bid from T. C. Brasfield for addition to bottling plant, \$200,000.

**BIRMINGHAM**—Connors Steel Co. let contract to Rust Engineering Co., Birmingham, for addition to existing plant, \$1,000,000.

**CHAPMAN**—W. T. Smith Lumber Co. let contract to Rust Engineering Co., Birmingham, for boiler plant, \$250,000.

**DEMOPOLIS**—Corps of Engineers, Mobile, let contract to J. W. Bateson Co., Inc., and Stolte, Inc., Dallas, Texas, \$1,974,392, for lock, dam and appurtenances on Black Warrior and Warrior and Tombigbee Rivers.

**DOTHAN**—First National Bank plans remodeling, \$100,000.

**ENSLEY**—Jefferson County plans sewage treatment plant, \$4,414,000.

**FAIRFIELD**—Harbison Walker Refractories Co., Pittsburgh, Pa., let contract to Rust Engineering Co., Birmingham, for manufacturing plant, \$4,000,000.

**FORT MCLELLAN**—U. S. Engineer Office, Mobile, received low bid from T. H. Pearce & Co., Columbus, Ga., \$1,100,056, for rehabilitation buildings.

**GADSDEN**—Pioneer Life & Casualty Co. plans addition, \$100,000.

**HUNTSVILLE**—U. S. Engineer Office, Mobile, let contract to Butler & Cobbs, Montgomery, for administration-engineering, laboratory and miscellaneous facilities, Redstone Arsenal, \$1,000,000.

**MONTGOMERY**—State Highway Department announced \$2,000,000 Ensley overpass and completion of long-sought, 4-lane highway, \$500,000.

**MONTGOMERY**—State Highway Department received low bids for projects in following counties:

**Fayette**—Proj. S-649, 11,439 mi. grad. and drain; Vandigrift Construction Co., \$320,888.

**Jackson**—Proj. S-691-B, 3,889 mi. grad. and drain; Vandigrift Construction Co., \$82,983.

**Monroe**—Proj. S-690, 4,957 mi. grad. and drain; Vandigrift Construction Co., \$74,665.

**St. Clair**—Proj. SACP-244-A, 2,167 mi. grad. and bitum. treat.; A. L. Crow Construction Co., Birmingham, \$64,080.

**Clarke and Choctaw**—Proj. S-531-C, 0.244 mi. substructure of Coffeyville bridge; Vandigrift Construction Co., \$253,970.

**Jackson**—Proj. S-696, 0.278 mi. substructure of Stevenson bridge; Vandigrift Construction Co., \$359,154.

**MUSCLE SHOALS**—Tennessee Valley Authority received low bid from Brice Building Co., Birmingham, \$314,424, for transportation garage and shed building, Wilson Reservation.

**PHENIX CITY**—Housing Authority let contract to Williams Construction Co., \$1,412,000, for low rent housing project.

**ROANOKE**—City let contract to Seabee Construction Co., Tuscaloosa, \$211,088, for natural gas system.

## ARKANSAS

**ARSENAL**—Corps of Engineers plans 18 warehouse buildings, garages, appurtenances, Pine Bluff Arsenal, \$500,000.

**BRINKLEY**—Mercy Hospital plans erection of 2-story, 50-bed Gatzola Memorial Hospital building, \$500,000.

**CONWAY**—Ward Body Works plans plant, \$150,000.

**EL DORADO**—Columbian Carbon Co. plans furnaces, carbon black plant, annual capacity 36,000,000 pounds, \$1,360,000.

**MARIANNA**—Corps of Engineers, Memphis, Tenn., let contract to Driver Contracting Co., Memphis, Tenn., \$246,400, for earth-

work in lower St. Francis Levee District along right bank of Mississippi River, Item No. R-692, Levee County.

## DISTRICT OF COLUMBIA

**WASHINGTON**—District Commissioners received low bid from Leo Butler Co., College Park, Md., \$61,969, for east suction piping, general installation construction at Bryant Street Pumping Station.

**WASHINGTON**—Post Quartermaster, Purchasing and Contracting Office, let contract to John J. Fitzgerald, \$24,495, for re-paving waterlines, east main, Bldg. 1F, Army Medical Center.

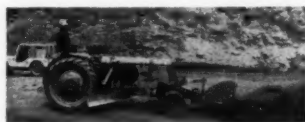
**WASHINGTON**—Housing and Home Finance Agency plans bill billion-dollar private defense housing program and \$250,000,000 public housing program.

**WASHINGTON**—District Commissioners received low bid from McGuire & Rolfe, \$104,112, for resurf. roadways of various streets with asphalt, top and binder.

**WASHINGTON**—District Commissioners received low bid from Curtin & Johnson, \$73,896, for Portland cement concrete alleys and sidewalks.

**WASHINGTON**—Corps of Engineers let contract to Henry Nau & Co., Washington, D. C., \$254,700, for reconstructing heating plant, Army Medical Center.

**WASHINGTON**—National Bureau of Standards received low bid from Sam N. Zarpas, \$27,650, for addition to Bldg. 84.



Above—Versatile clean-up unit in the mines of Evans Coal Co., west of Fort Smith, Ark., is this Huber maintainer equipped with grader blade and one-way broom attachment. The Huber machine grades off the loose material in the pits and then sweeps and cleans the coal. Tri-State Equipment Co., Inc., Little Rock, is the Arkansas distributor for the Huber line.

## FLORIDA

State Road Department, Tallahassee, announced tentative budget of \$141,000,000 for 1951, which includes some of the following:

\$27,854,845 for road and bridge work in Duval County, \$67,158,360 in primary roads, \$7,248,547 for maintenance, \$2,688,361 for administration, \$3,321,067 for rights-of-way purchases, \$25,722,745 for Jacksonville Super-Highway and bridge project, \$1,230,000 for Lower Tampa Bay bridge connecting Pinellas and Manatee Counties, \$1,000,000 for Fort Lauderdale bridge and tunnel project, \$404,431 for state institutions and \$1,083,540 to construct roads, parking areas, bridges and other facilities for state parks; also \$985,000 for Road 5 between Miami and Homestead in Dade County, \$1,400,000 for Road 9 in Dade and \$675,400 in Broward and \$1,085,700 for Road 5 projects in Broward.

**Dade County**—Pioneer Development Co., Miami Beach, let contract to Star Construction Co., Miami, Fla., \$514,378, for 79-unit apartment building.

**Dade County**—Dade County Board of Public Instruction, Miami, received low bid from Thompson-Polizzi Construction Co., Coral Gables, \$396,000, for Goulds School.

**JACKSONVILLE**—Lehigh Portland Cement Co., Allentown, Pa., plans \$8,000,000 plant near Jacksonville.

**JACKSONVILLE**—Navy Department plans improvements, Naval Air Station, \$3,758,000.

**JACKSONVILLE**—Navy Department, Public Works Office, let contract to George D. Auchter, Jacksonville, \$1,377,730, for rehabilitation and new construction of buildings, NATTC Naval Air Station.

**JACKSONVILLE**—Navy Department plans improvements, bulk fuel terminal, \$3,175,000; from seven to ten new tanks are to be erected; dock and channel approach will be improved.

**JACKSONVILLE**—Duval County Board of Public Instruction let contract to O. P. Woodcock Co., \$311,174, for elementary school in the Hyde Park section.

**KEY WEST**—Navy Department, Public Works Office, Naval Base, S. C., received low bid from Arundel Corp., Baltimore, Md., \$2,404,100, for dredging at Naval Submarine Base.

**KEY WEST**—Navy Department plans additional aviation facilities, Naval Air Station, \$999,000.

**LAKELAND**—Polk County Board of Public Instruction, Bartow, plans high school, \$500,000.

**MAYPORT**—Navy Department plans additional aviation facilities, Naval Air Force, \$3,035,000.

**MIAMI**—Kent Properties, Inc., Miami Springs, plans 32 residences, \$267,087.

**MIAMI**—Board of Dade County Commissioners, Dade County Port Authority, received low bid from Troup Brothers, Inc., \$998,179, for east-west runway, runway extensions and taxiways, International Airport.

**MIAMI**—Dade County Board of Public Instruction plans addition to George Washington Carver school for colored, \$500,000.

**North Dade and Broward Counties**—Corps of Engineers, Jacksonville, received low bid from Hoper Construction Co., Coral Gables, \$1,270,862, for levees L-6 and L-7.

**ORLANDO**—House Armed Services Committee approved allocation of \$30,400,000 for expansion of Pinecastle Air Force Base.

**PANAMA CITY**—U. S. Engineer Office, Mobile, Ala., let contract to Wright Contracting Co., Columbus, Ga., \$1,241,034, for runway, taxiways, aprons, lighting facilities and storm drains, Tyndall Air Force Base.

**PENSACOLA**—Navy Department plans jet airfield, \$23,000,000.

**ST. PETERSBURG**—First Ave. Methodist Church let contract to Edward S. Moore & Sons, \$600,000.

**TALLAHASSEE**—State Road Department received low bids for projects in following counties:

**DeSoto**—State Proj., Job 0401-107, Rd. 31, bridge; Hubbard Construction Co., Orlando, \$77,218.

**Manatee**—Job 1351-151, Rd. 675; John A. Benton Construction Co., St. Petersburg, \$58,502.

**Hillsborough**—Jobs Nos. 1004-105 and 1008-104, Rds. 45 and 60; Cone Brothers Construction Co., Tampa, \$106,659.

**Glades**—Job 0504-103, Rd. 78; Brinson Construction Co., Tampa, \$182,479.

**Alachua**—Job 2602-110, Rd. 20; James H. Crages Construction Co., Ocala, \$124,030.

**Citrus**—Job 0203-111, Rd. 55; Macasphalt Corp., Lakeland, \$533,643.

**St. Lucie**—Job 9452-150, Rd. S-609; Brinson Construction Co., Tampa, \$163,104.

**Polk**—Job 1625-106, Rd. 37; Cone Brothers Contracting Co., Tampa, \$190,741.

**Santa Rosa**—Fed. Aid Proj. F1-006-1(4), Job 5801-208, Rd. 40; Faulk & Coleman Construction Co., Tallahassee, \$229,770.

**Jefferson**—Fed. Aid Proj. F1-006-4(3), Job 5401-205, Rd. 10; Georgia-Alabama Paving Co., Columbus, Ga., \$339,480.

**Pinellas**—Fed. Aid Proj. S-98(2), Job 1551-250, Rd. S-694; W. H. Armstrong Co., Inc., Dunedin, \$184,236.

**Martin**—Fed. Aid Proj. S-235(1), Job 8951-250, Rd. S-708; Finley F. Smith, Fort Lauderdale, \$82,142.

**Hillsborough**—Fed. Aid Proj. 310(1), Job 1055-250, Rd. S-579; Cone Brothers Contracting Co., Tampa, \$99,447.

**Hendry**—Fed. Aid Proj. S-313(1), Job 0753-250, Rd. S-832; R. H. Wright & Son, Fort Lauderdale, \$124,916.

**Eschscholtz**—Fed. Aid Proj. U-502(1), Job 4805-201, Rd. 292; Noonan Construction Co., Pensacola, \$507,724.

**Citrus**—13.51 mi. grade and pave. on Rd. 25 between Chasandott and Crystal River; Macasphalt Corp., Lakeland and J. D. Manly Co., Leesburg, \$533,648.

**Hernando**—Grad. and pavt. Rd. 50; A. F. Rich, \$336,348.

**Jefferson**—Excavating channel and 2 conc. and steel bridges over Aucilla River on Rd. 30; Peterson & Earnhart, \$164,704.

**Columbia**—Paving access roads at Watertown; Asphalt Paving Co., \$124,030.

**Gilchrist**—Resurf. Rd. 49; Macasphalt Corp., \$56,400.

**Alachua**—Grad. and pavt. Rds. 20 and 25; Duval Engineering & Contracting Co., \$328,612.

**Marion**—Pavt. Rd. S-328; White Construction Co., \$136,670.

**Alachua**—Grad. and pavt. Rd. 20; James H. Crages, \$124,030.

**Volusia**—Grad. and Pavt. Rd. S-415; W. L. Cobb, \$153,235.

**Marion**—Grad. and Pavt. Rd. 40; Marion



Construction Co., \$186,323;

**Taylor and Madison**—Conc. bridge and 14 conc. culverts on Rd. 55 and 20; Scott Construction Co., \$257,935;

**Dade**—Fed. Aid Proj. F-003-2(1), Job 8702-203; Troup Brothers, Inc., Miami, \$3,636,086; **Dade**—Fed. Aid Proj. U-026-1(4), Job 8607-201, Rd. 9; H. E. Wolfe Construction Co., St. Augustine, \$377,261;

**Collier**—Contr. 2574, Jobs 0307-152, Rd. 29, completion of grad. and pavt.; Brinson Construction Co., \$244,534;

**Jefferson and Wakulla**—Contr. 2572, Jobs 5411-103, etc., Rd. 30, completion of grad. and pavt.; Faulk & Coleman, \$554,887;

**Columbia and Baker**—Contr. 2573, Jobs 2702-104, completion of grad. and pavt.; Scott Construction Co., Thomasville, Ga., \$459,665;

**TAMPA**—State Tuberculosis Board, Tallahassee, let contract to Arnold Construction Co., West Palm Beach, \$1,618,777, for main hospital and heating plant, State Tuberculosis Hospital.

## GEORGIA

**ATLANTA**—State Highway Department received low bids for projects in following counties:

**Fulton**—Fed. Aid Proj. U-001-5(2), 0.449 mi. grad. and pavt. on North Ave. connection; Wright Contracting Co., Columbus, \$237,531;

**Walker**—Fed. Aid Proj. U-017-3(2), 0.116 mi. grad. and pavt. on Chickamauga Ave. in Rossville; Dave L. Brown, Chattanooga, Tenn., \$55,399;

**Henry**—Fed. Aid Proj. F-037-2(1), 2,570 mi. grad. and pavt. on McDonough to Jackson Rd., also widening present S.R. 42; Walner Construction Co., Inc., Valdosta, \$318,308;

**Towns**—Fed. Aid Proj. F-038-1(2) and F-038-1(3), 0.843 mi. widening and resurf. Hiawasse on Blairsville to Clayton Rd., also 0.607 mi. widening and resurf. in Young Harris; M. R. Woodall Co., Inc., Atlanta, \$219,885;

**Clayton**—Fed. Aid Proj. F-074-2(1) and F-066-1(1), 2.177 mi. grad. and pavt. on relocation Atlanta-Jonesboro Rd., also 1.081 mi. grad. and pavt. on U.S. 1 bridge; E. A. Hudson's Sons, Bolton, \$519,091;

**Echols**—Fed. Aid Proj. F-088-1(1), 8.998 mi. grad. and pavt. and 1 bridge on Stateville to Fargo Rd.; W. T. Anderson, Inc., Thomson, \$385,374;

**Bartow**—Fed. Aid Proj. F-1-26(9), 6.346 mi. grad. and pavt., also 4 double bridges on Cartersville to Adairsville Rd.; Ledbetter-Johnson Co., Rome, \$1,279,421;

**Jones**—Fed. Aid Sec. Proj. S-0779(1), 5.238 mi. grad., base and surf. treat.; Acme Construction Corp., Cochran, \$75,874;

**Cherokee and Fulton**—Fed. Aid Sec. Proj. S-0860, 3.624 mi. grad., pavt., repairs to 1 bridge and 1 new bridge on Canton to Roswell Rd.; E. A. Hudson's Sons, Bolton, \$218,195;

**Lincoln and Elbert**—State Aid Proj. SAP-1575(6), 3.872 mi. grad. and surf., also substructure for bridge at Broad River; W. T. Anderson, Inc., Thomson, \$150,965;

**Wilcox**—State Aid Proj. SAP-1909-B(7), 0.945 mi. widening present pavt. on Rochelle to Fitzgerald Rd. in Rochelle and surf. connecting streets; Crumney & Crumney, Rochelle, \$59,494;

**Fulton and Cobb**—Fed. Aid Proj. F-371(2) Contract 3 and FG-371(3) Contract 2, 0.855 mi. conc. paved approaches to new bridge at Chattahoochee River at Bolton, also connection to present S.R. 3; W. L. Cobb Construction Co., Decatur, \$90,225;

**Haralson**—Fed. Aid Sec. Proj. S-0692(5), new bridge and approach slabs at Tallapoosa River; C. L. Rhodes, Decatur, \$67,377;

**Carroll**—Fed. Aid Sec. Proj. S-0844(2) Contract 2, new bridge at Little Tallapoosa River; G. W. Burtz, East Point, \$88,272;

**ATLANTA**—Plantation Pipe Line Co. let contract to Latex Construction Co. of Georgia, \$1,500,000, for enlargement of existing pump stations, Baton Rouge, La., Collins, Miss., Akron and Silver Run, Ala., Bremen and Center, Ga., and Spartanburg, S. C.

**CLARKES**—Board of Education received low bid from A. C. Sanford, Inc., Albany, \$187,129, for Habersham County High School.

**BRUNSWICK**—Housing Authority received low bid from Byck-Worrell Construction Co., Savannah, Ga., \$1,463,947, for low rent housing project.

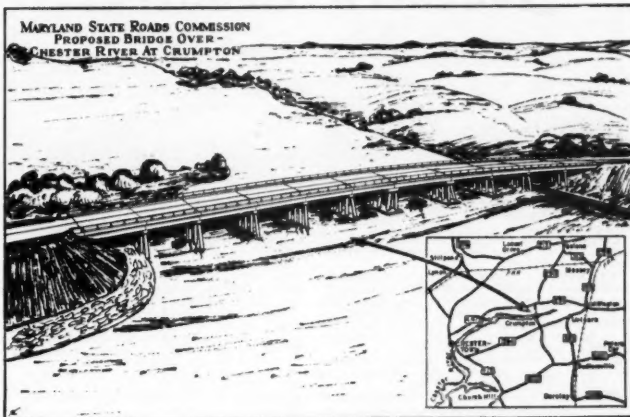
**COLUMBIA**—Board of Education received low bid from Jordan Contracting Co., \$336,115, for alterations and additions to four schools.

**COMMERCE**—City received low bids for water works and sewerage improvements; Division I, C. Y. Thomson Co., Greenwood, S. C., \$501,197, and Division II, R. D. Cole Mfg. Co., Newnan, \$33,000.

**DECATUR**—Protestant Church Congregation received low bid from Brittain-Pattillo Co., \$475,211, for church building.

**EAST POINT**—Ford Motor Co. let contract (Continued on page 30)

## Maryland Replacing Chester River Bridge



The hand-operated timber draw-bridge now connecting upper Queens County with Kent County across the upper Chester River is being replaced with a modern concrete and steel structure under a current project of the Maryland State Roads Commission.

Located about eighty-five feet upstream, or east of the existing 195-foot bridge, the new bridge will be 364 feet long from abutment to abutment with a 26-foot clear roadway flanked by one and one-half-foot safety curbs. Width of the present roadway is about 12 feet.

No draw will be required in the new bridge which will be a fixed structure with a channel span allowing a horizontal clearance of 40 feet. Minimum vertical clearance above mean low water will be 14 feet. The present span gives a channel opening of about 24 feet.

The new project will include new approaches, as well as the new bridge structure. This will have a concrete slab floor on steel I-beams supported by concrete cap bents on cast-in-place concrete piles. The approach will be paved with compacted gravel.

Plans for the project were prepared entirely by the Division of Bridge Design of the Maryland State Roads Com-

mission, headed by Albert L. Grubb. Upon completion of the new bridge, which will provide better alignment and improved sight distances, the old span will be removed, although the bulkheads will be retained to support the embankments on both shores.

McLean Contracting Co., prominent Baltimore construction firm which recently completed the Patapsco River bridge on the Baltimore-Washington expressway and is also engaged on the Kent Narrows bridge, submitted the low bid of \$196,000 for construction of the upper Chester River span at Crumpton. Completion is scheduled early in summer of 1951.

Considerable quantities of materials are being required in construction. Estimates of major items for the bridge include 3,700 linear feet of cast-in-place concrete piles (fluted metal tubes filled with concrete and reinforcing steel); 650 cubic yards of concrete; 110,000 pounds of reinforcing bars and 260,000 pounds of structural steel.

The approaches will require about 40,000 cubic yards of borrow excavation and about 4,000 square yards of gravel surfacing. The nine inches of compacted gravel will be placed in two layers.

## Electric Generator Units

Production of a standard commercial line of Cummins diesel-powered electric generator units is announced by Cummins Engine Co., Inc., of Columbus, Ind.

Sixty-cycle units are available in 40, 50, 60, 75, 100, 125, 200 and 250 kilowatt ratings. Similar units are also available for 50-cycle operation at a slight de-rating in KW capacity.

These Diesel generator units are designed for continuous service applications where the unit is the primary source of power. Their automatic overspeed shut-down control; automatic high temperature and low lubricating oil pressure shut-down; complete marine-type or radiator-type cooling systems; hydraulic governor; water-cooled exhaust manifold, and generator mounted package control unit. Special generator voltages and KW ratings are also available.

## 9-Ton Tournarocker Announced

A new model rear dump hauling unit—the E-9 Tournarocker—is being announced by R. G. LeTourneau, Inc., Peoria, Ill. Designed for loading by shovel, dragline, or backhoe the E-9 Tournarocker is powered by the D Roadster Tournapull prime mover with the GM4-71 engine and is especially suited for construction work.

The new model Tournarocker has a 9-ton or 10 cubic yard heaped capacity. Its big 11' by 7' top opening and low body—only 7' high for rear loading—permits easy spotting and loading. The load is carried down between the wheels, giving a low center of gravity for greater stability.

Positive power electric steering by Tournaroller motor plus a 30° left and right turning radius make the Tournarocker highly maneuverable. Able to turn around in a 14' 5" radius, the unit can operate in narrow cuts or side-hill jobs.

The Tournarocker dumps material behind its rear tires by raising the 'rocker body with a cable and sheave arrangement which is actuated by a Tournaroller electric motor.

# Southern Construction Projects

## GEORGIA

(Continued from page 29)

tract to Austin Co. for multi-million-dollar expansion program; will build a new service parts depot and district sales office building, \$1,500,000.

**GREENVILLE** — Meriwether County Commissioners let contract to Daniel Lumber Co., LaGrange, \$118,000, for Meriwether County Office & Health center.

**LAGRANGE** — City let contracts for sewerage system improvements as follows: Division I, Arthur Penn Construction Co., Atlanta, \$861,716; Division II, S. J. Curry & Co., Albany, \$543,700.

**LAGRANGE** — City let contract for natural gas system to Barry Construction Co., Houston, Tex., \$474,886.

**MARIETTA** — Cobb County Commissioners plan water supply system with treatment, transmission and storage facilities, \$2,618,990.

**ROME** — Georgia State Department of Public Health, Atlanta, received low bid from J. P. Roberts, Rome, \$135,900, for laboratory building, Battley State Hospital.

**TIFTON** — Central City Board of Education plans school building with cafeteria and auditorium-gymnasium, \$265,390.

**TUCCO** — City let contract to Birmingham Building Co., Birmingham, Ala., for municipal gas transmission and distribution system, \$1,397,000.

## KENTUCKY

**BEREA** — Berea Rubber Co., newly-formed subsidiary of Parker Appliance Co. of Cleveland, Ohio, constructing precision rubber plant, \$550,000.

**FORT KNOX** — Post Quartermaster let contract to Breslin Construction Co., Louisville, \$123,786, for resurfacing roads.

**FRANKFORT** — State Highway Department let contracts for projects in following counties:

**Ballard** — Oscar-Bandana Rd., grade, drain and traf. bound surf., 5 mi.; Pater-DeWitt Construction Co., Poplar Bluff, Mo., \$107,833.

**Bracken** — Brooksville-Augusta Rd., grade, drain and traf. bound surf., 2 mi.; M. T. Codell Co., Winchester, \$104,921.

**McLean** — Central City-Greensboro Rd., grade, drain and traf. bound surf., 3 mi.; Mulligan Brothers, Inc., Greenville, \$147,239.

**Rowan** — Morehead-Vanceburg Rd., grade, drain and traf. bound surf., 3 mi.; Lovell & Hart Construction Co., Lexington, \$64,195.

**Carroll** — Erecting and painting steel superstructure of bridge over Kentucky River; Harry O. Wyse, Lexington, \$149,000.

**Carroll** — Conc. floor and lighting systems; Harry O. Wyse, \$145,628.

**FRANKFORT** — Department of Highways received low bids for projects in following counties:

**Greene** — Proj. F-535(1), SP-45-591, 45-211, 1.814 mi. traf. bound slag; R. R. Dawson Bridge Co., Bloomington, \$318,512.

**Carter** — Proj. SP-22-888, 2.572 mi. traf. bound limestone and piling alt. "A"; Lovell & Hart Construction Co., Lexington, \$129,467, and traf. bound limestone and piling alt. "B"; Lovell & Hart Construction Co., \$29,983.

**Elliot** — Proj. RS 32-109, 32-569, 6.010 mi. traf. bound limestone; Lovell & Hart Construction Co., Lexington, \$110,711.

**LONDON** — London-Laurel County Development Association plans airport, \$240,000.

**LOUISVILLE** — Board of Education received joint low bid of \$2,074,000 from Derby Construction Co., Perkins Construction Co. and F. W. Owens Co., for new Central High School.

**OWENSBORO** — Green River Steel Corp. plans \$8,356,000 electric-furnace steel plant, \$8,356,000.

**PADUCAH** — McCracken County plans 36-bed hospital addition, including nurses' home facilities, \$824,040.

**PINEVILLE** — City plans floodwall, Cumberland River, \$547,000.

**WHITESBURG** — Business Men's Club plans swimming pool, \$75,000.

## LOUISIANA

**BATON ROUGE** — Department of Highways let contracts for projects in following parishes:

**Sabine** — Surfacing 5 mi. Rt. 6, Pendleton-Mary Hwy.; O. J. Ward, Inc., Shreveport, \$240,673.

**Vernon** — Surf. 5 mi. Rt. 22, Cravens-Pittkin Hwy.; M. E. Pollard, Bossier City, \$103,203.

**BATON ROUGE** — Department of Highways received low bids for projects in following parishes:

**Orleans** — Furnishing clamshell, spot-dumped; Jahneke Service, Inc., New Orleans, \$82,938.

**Lafayette** — State Proj. 216-02-08, Rt. 236, furnishing base course shell or, as alternate, base course gravel (grade "A") spot-dumped on Erath-Youngsville Hwy.; Alexandria Gravel Co., Inc., Alexandria, \$102,711.

**Tangipahoa** — Pur. Req. No. 28048A, Anderson Gravel Co., Amite, \$27,230.

**Lafayette** — State Proj. 703-07-74, 5.045 mi. drain. str. and grav. surf. course; Harkins Contracting Co., Lafayette, \$24,185.

**Vermilion** — Pur. Req. No. 25065A, Proj. 216-01-02, Rt. 145, furnishing base course shell spot-dumped; Stevens & Co., Inc., Industrial Canal & Hwy. No. 90, New Orleans, \$174,020.

**Lafayette** — Pur. Req. No. 25073A, Proj. 216-02-08, Rt. 236, furnishing base course shell spot-dumped; W. T. Burton, Sulphur, \$127,071.

**Rapides** — State Proj. 15-01-19, Rt. 14, Old Alexandria-Pineville traffic bridge over Red River, bridge repairs; Forcum-James Co., Box 911, \$133,930.

**Calcasieu** — State Proj. 3-04-24 and 3-05-10, Fed. Aid Proj. FI-35(21), Rt. 2, 11.296 mi. grad., conc. slab span bridges, small drain. str., patching and widening existing conc. floor and bitu. surf. of existing conc. pavt. and exist. brick pavt.; T. L. James & Co., Inc., Ruston, \$856,837, for Method 1 and Sam Finley, Inc., Atlanta, Ga., \$772,823, for Method 2.

**Vermilion** — Pur. Req. No. 25065A, State Proj. 216-01-02, Rt. 148, 6.6 mi. furnishing base course shell or, as alternate, base course gravel (Grade "A") spot-dumped; Alexandria Gravel Co., Inc., \$145,702.

**Lafayette** — Pur. Req. No. 25073A, State Proj. 216-08-08, Rt. 236, 4.7 mi. furnishing base course shell or, as alternate, base course gravel (Grade "A") spot-dumped; Alexandria Gravel Co., Inc., \$102,711.

**Orleans** — Pur. Req. Nos. 28744A and 28743A, State Proj. \$36-10-04 and \$36-02-04, Rt. 998, 5.50 mi. furnishing clamshell, spot-dumped; Jahneke Service, Inc., \$82,938.

**BATON ROUGE** — East Baton Rouge Parish School Board plans office building and service center, \$220,000.

**BATON ROUGE** — Plantation Pipe Line Co., Baton Rouge, La., let contract to Westinghouse Electric Corp., \$6,000,000, for electrical equipment.

**BATON ROUGE** — Gulf States Utilities Co. plans additions: 20,000 kilowatt turbo-generator, June, 1951; 60,000 kilowatt, May, 1953; \$22,580,000.

**FRANKLIN** — Corps of Engineers, New Orleans, received low bid from McWilliams Dredging Co., New Orleans, \$158,505, for Avoca Island Levee.

**GREYNA** — Seventh Ward of Jefferson Parish plans fire department, \$700,000.

**LAKE CHARLES** — Lake Charles Memorial Hospital Association received low bid from T. Miller & Sons, \$1,639,562, for 100-bed Lake Charles Memorial Hospital.

**MADEWILLE** — State Division of Administration, Baton Rouge, received low bid from R. P. Farnsworth & Co., New Orleans, \$1,427,000, for acute and diagnostic building, Southeast Louisiana State Hospital; Dye & Mullins, Columbia, Miss., \$146,577 on three doctor's residences and four apartment units; R. P. Farnsworth & Co., New Orleans, \$273,233 on site improvements.

**NEW ORLEANS** — Henry J. Kaiser Co., Oakland, Calif., plans aluminum plant in New Orleans metropolitan area; \$70,000,000 initially, with a total financial output eventually to reach \$100,000,000.

**RUSTON** — City plans \$1,000,000 sewer expansion program.

**RUSTON** — Louisiana Polytechnic Institute let contract to Charles Carter & Co., Inc., Baton Rouge, \$1,080,000, for gymnasium.

**ST. BERNARD** — Kaiser Aluminum & Chemical Corp., Oakland, Calif., plans aluminum reduction plant and power facilities, \$79,000,000; Consolidated Steel of Orange, Tex., has construction contract.

**SHREVEPORT** — Robert E. McKee, Dallas, Tex., awarded negotiated contract for expansion of facilities, Barksdale Air Force Base, \$1,400,000.

**SHREVEPORT** — State Division of Administration, Baton Rouge, received low bid from J. A. Jones Construction Co., Shreveport, \$2,037,000, for nursing school for Confederate Memorial Medical Center.

**TRUSSVILLE** — City let contract to P. A. Buchanan Contracting Co. for natural gas distribution system extensions, \$450,000.

## MARYLAND

**MARYLAND** — Ralston Purina Co., Kansas City, Mo., plans \$1,000,000 warehouse and feed mill in lower Sussex County, Delaware, near Delmar.

**MARYLAND** — State Board of Education, Annapolis, submitted \$45,000,000 building and

spending program.

**MARYLAND** — State sold \$17,564,000 in various purpose bonds to banking group managed by Chase National Bank of New York and Alexander Brown and Sons, Baltimore.

**ABERDEEN** — U. S. Army will expend loan of 1950, \$2,132,000 school construction loan of 1949 and \$560,000 army loan of 1948.

**ABERDEEN** — U. S. Army will expend approximately \$7,000,000 for new ordnance facilities; work will start soon on a \$200,000 air-to-ground light tracking facility, a \$181,000 high explosive assembly-disassembly unit, a \$2,525,000 climate-testing unit and a \$144,000 bomb-test facility; other projects for which funds have been allocated include a \$1,250,000 ballistics laboratory, reconstruction of central heating plant, expansion of the trans-sonic range, a \$762,000 artillery and fire-control training shop and a new ammunition testing range.

**BALTIMORE** — State Roads Commission, Baltimore, received low bid for project in following county:

**Anne Arundel** — Contract No. AA-263-9-315, conc. floor and sidewalks and steel handrail, etc., for bridge now being built over Severn River on Annapolis by-pass; Camden Construction Co., Inc., \$781,675.

**BALTIMORE** — Consolidated Gas Electric Light and Power Co. plans \$29,000,000 program to expand its fuel and power facilities.

**BALTIMORE** — Johns Hopkins Hospital let contract to Consolidated Engineering Co., Inc., for Medical Research Building, \$2,500,000.

**BALTIMORE** — Board of Estimates let contract to Costanzo Construction Co., \$533,398, for alterations and additions to School No. 88.

**BALTIMORE** — Board of Estimates asked to authorize a new \$1,000,000 jail loan, and a \$4,000,000 building loan.

**BALTIMORE** — Board of Estimates recommended award of contract to DeLuca-Davis Construction Co., Inc., \$1,690,000, for new Peoples Court Building.

**BALTIMORE** — Corps of Engineers received low bid from Arundel Corp., \$586,624, for maintenance and improvement dredging in Brewerton Section and Brewerton Harbor Channel.

**BALTIMORE** — City plans modified port authority and \$30,000,000 port-improvement program.

**BALTIMORE** — Salvation Army received low bid from Charles R. Scribner, \$173,260, for storage building; Briscoe & Henrietta Sts.

**COLLEGE PARK** — Department of Public Improvements, Baltimore, let contract to George Hyman Construction Co., Washington, D. C., \$860,200, for physics building, University of Maryland.

**FREDERICK** — Potomac Edison Co. plans \$14,000,000 construction program.

**Prince Georges and Anne Arundel Counties** — Bureau of Public Roads, Arlington, Va., let contract to Wright Construction Co., Columbus, Ga., \$670,335, for Baltimore-Washington Parkway, Project 1F1 and 1G1, grad., drain, and other work.

**UPPER MARLBORO** — Prince Georges County School Board approved 5 school projects at Berwyn, Chillum, Silver Hill and Buena Vista and addition at Ager Road Elementary School; part of two-year, \$6,600,000 construction program.

**WHITE OAK** — Navy Department, Public Works Office, Washington, D. C., received low bid from Rogers & McGrath, \$815,000, for completion of continuous wind tunnel, Naval Ordnance Laboratory.

## MISSISSIPPI

**BILOXI** — U. S. Air Force plans 961-bed medical unit, mess hall, hospital, chapels, theatre, post exchange and gymnasium, Keesler Air Force Base, \$35,900,000; also \$8,000,000 for Gulfport Air Field, including 2 hangar renovation, new parking aprons, new administration building, barracks, mess halls, etc.

**BROOKHAVEN** — Housing Authority received low bid from H. S. H. & Co., Brookhaven, \$670,000, for 100-unit housing project.

**CLEVELAND** — City plans \$250,000 expansion of Baxter Laboratories.

**COLUMBUS** — Columbus Community School District plans \$1,500,000 school construction.

**FERNWOOD** — Board of Supervisors of Pike County, Magnolia, let contract to John Low, Jr., Laurel, \$252,450, for box factory to be leased to Indianapolis Wirebound Box Co.

**GREENWOOD** — Board of Supervisors of Leflore county plan enlargement and improvement for Courthouse and modernization of other county offices, \$250,000.

## CONSTRUCTION

**HATTIESBURG** — Board of Supervisors of Forrest County let contract to W. R. Fairchild Construction Co., \$112,758, for bridge and approaches and removal of existing bridge across Bouie River in Forrest County.

**JACKSON** — Board of Trustees of Jackson Municipal Separate School District let contracts for following schools: Minnie D. Sykes Elementary School, L. A. Harvey, Jackson, \$218,000; new Emma French Elementary School, Howie Construction Co., Jackson, \$219,500; new Viola E. Lake Elementary School, Howie Construction Co., Jackson, \$219,985; new Laura R. Lester Elementary School, Howie Construction Co., Jackson, \$211,000 and Ollie M. Bradley Elementary School and Mary Lee Boyd Elementary School addition, King-North Construction Co., Jackson, combination bid of \$299,365.

**JACKSON** — City Council plans street paving and improvements on 22 streets for 1951, \$1,000,000.

**JACKSON** — State Highway Commission let contracts for projects in following counties:

**Clallborne and Copiah** — 11.979 mi. grad., drain., culverts and bridges on Hwy. 18; J. H. Moon, Port Gibson, \$337,753;

**Tishomingo** — 4.270 mi. grad., drain., culverts, box bridges and bridge on Hwy. 25; Worsham Brothers, Corinth, \$415,691;

**Hawanna** — 7.815 mi. grad., drain., culverts and box bridges on Hwy. 23, Linwood Smith, Lake Village, Ark., \$196,927;

**Coahoma** — 7.60 mi. grad., drain., culverts and bridge on Hwy. 1; S. L. Reed, Beizon, \$192,465;

**Franklin** — 13.085 mi. grad., drain., culverts and box bridges on Hwy. 44; Dickerson & Bowen, Brookhaven, \$178,010;

**Perry and Greene** — 3.258 mi. grad., drain., culverts, box bridge and bridges on Hwy. 42; W. R. Fairchild, Hattiesburg, \$231,520;

**Wilkinson** — 6.206 mi. grad., drain., culverts and double bitum., surf. treat. on Hwy. 61 and 85 between Louisiana-Mississippi state line and Woodville; Gex and Cue, Bay St. Louis, \$169,710;

**Harrison** — 4.828 mi. grad., drain., culverts, grav. surf. course, box bridge and bridge on Hwy. 55 and 57 between Biloxi and Sueric; Gex and Cue, Bay St. Louis, \$93,239;

**Pearl River** — 7.755 mi. grad., drain., culverts, base and double bitum., surf. treat. on Hwy. 43; Gex and Cue, \$134,101;

**Kemper and Winston** — 5.660 mi. incidental grad. and drain., base preparation and double bitum., surf. treat. on Hwy. 397; Talbot Brown, Meridian, \$81,794;

**Marshall** — 0.183 mi. grad., drain., culverts, bridge and double bitum., surf. treat. on Hwy. 4; M. & W. Construction Co., Tupelo, \$71,579;

**Tate** — 4.171 mi. grad., drain., culverts and bridge on Hwy. 4; O. J. Stanton, Greenwood, \$191,277;

**Stone** — 8.469 mi. grad., drain., culverts, box bridge and bridge on Hwy. 26; Pigford Brothers, Meridian, \$299,879;

**Smith** — 8.411 mi. grad., drain., culverts and bridge on Hwy. 37; King Construction Co., Taylorsville, \$154,109;

**Scott** — 5.017 mi. incidental grad., base preparation and double bitum., surf. treat. on Hwy. 21; J. E. Russell, Mount Olive, \$67,464;

**Newton** — Proj. F1-004-2(1), 4.370 mi. grad., drain., culverts, grav. base course and box bridge on U. S. Hwy. 80; Pigford Brothers Construction Co., Meridian, \$136,100.

**JACKSON** — State Building Commission plans medical school and teaching hospital, University of Mississippi, \$8,500,000.

**JACKSON** — Mississippi Power Co. plans \$6,000,000 construction program.

**JACKSON** — City received low bid from Viking Construction Co., Houston, Texas, \$439,772, for sanitary sewers, Lynch Creek drainage area.

**MACON** — Noxubee County plans rebuilding burned courthouse, \$400,000.

## MISSOURI

**MISSOURI** — State Highway Department, Jefferson City, announced \$786,000,000 will be needed in next 10 years to minimum requirements of state's road system.

**BOLIVAR** — Southwest Electric Cooperative plans 333 miles of distribution line, headquarters facilities, system improvements, and completion of previously approved construction, \$975,000.

**CAMP CROWDER** — Fifth Army plans rehabilitation of Camp, \$1,400,000.

**FAIRFAX** — Ceco Steel Products Co., Kansas City, plans branch warehouse and office building; initial investment, \$300,000.

**BRONXTON** — Black River Electric Cooperative plans 345.5 miles of distribution line and system improvements, \$970,000.

**JEFFERSON CITY** — State Highway Commission let contracts for projects in following counties:

**Buchanan** — Proj. UG-888(2), Rt. 59, 0.447 mi. GE. bridges and var. width of P.C.C.

(Continued on page 32)

## International Minerals Erecting Fort Worth Building



Mosher Steel Co., of Dallas, has been awarded the building contract for the new Fort Worth, Texas, chemical fertilizer plant of International Minerals & Chemical Corp. The plant is to be located on the north side where a 30-acre site has been purchased adjacent to the plant of Consolidated Chemical Industries, Inc., which will be the source of the sulphuric acid to be used.

Plans for the project, which when completed is expected to represent an investment of \$500,000, were prepared by the company's own engineering department. The equipment for milling and conveying has been purchased.

Maurice H. Lockwood, International Minerals vice-president, in making the announcement of the new plant, commended the industrial department of the Fort Worth Chamber of Commerce for its co-operation in helping locate the site and for developing the data preliminary to its selection. He specifically mentions Harold D. Foster, who, he said, "was tireless in his effort to interest us in locating" at Fort Worth.

International Minerals & Chemical Corp. operates in two fields—industry and agriculture. It was around the turn of the century when farmers began to realize the importance of soil fertilization to their crops, particularly in the mineral-starved lands of the South, and many small plant food manufacturers sprang into existence. Among the new plants was International Agriculture Corp., founded in 1909. It grew rapidly into one of the leading firms in the industry.

The company's history since that time has been marked by steady expansion as a phosphate producer and manufacturer of plant food materials and complete fertilizers, with later diversification into potash chemicals and amino products. In 1941 the name was changed to International Minerals & Chemical Corp. to describe more accurately the character of the business.

To assure a continued supply of the principal raw materials for its plant food output, the company at its inception, in-

vested in phosphate lands in Florida and Tennessee. Prior to World War II it acquired a controlling interest in a potash mining development in New Mexico, later absorbing the potash company. Thus, it became the only manufacturer to control its own sources of two of the three principal raw materials for its production of plant food.

During the war years and subsequently, International has added substantially to its plants and line of products. One of its outstanding new products is monosodium glutamate, an amino salt that intensifies the natural flavors of many foods, and is marketed by International under the trade name "Ac'cent."

International has plants and offices in 50 cities and 20 states and representatives in many foreign countries. Its headquarters are in Chicago, chosen as a central point from which its nation-wide operations can be conveniently and quickly reached. Louis Ware became president and director of International in 1939. The corporation's present management is proud of the industrial and financial achievement during this past decade.

Ten years ago International's total sales were approximately \$15,000,000 annually. Its last annual report showed total net sales of more than \$53,000,000, representing an increase of 350 per cent. Today International Minerals & Chemical Corporation, is, by quite a margin, the largest producer of phosphate. It is the largest producer of monosodium glutamate. It is third in volume in the country's plant food industry. It is third in domestic production of potash. It is one of the major firms in the chemical industry.

The policy of expansion and diversification which has brought about its tremendous gain in sales has been accompanied by internal efficiencies and modernization. These factors have been responsible for a gain in net earnings during the decade from \$14,000 to over \$5,500,000 annually.

At the same time, total assets have more than doubled under the impact of the expansion program, growing from over \$27,000,000 to almost \$60,000,000.

## Coffing Safety Drop Hook

A new safety drop hook, capable of lifting, hauling and easily releasing any weight just as simply as a man handles a one-pound weight, is reported by the Coffing Hoist Co., Danville, Ill.

The Coffing safety drop hook is a mechanical type using toggle action. Every hook is factory tested at 100 per cent overload. On the model now in production, a 6000 pound

model, just a 40 pound pull on the release lever will quickly and efficiently release a three ton load. When released, the jaws automatically remain in the open position for easy reloading, thus speeding up the entire operation.

The side plates of the hook are made of special aluminum alloy and the load bearing hook, the internal cams and levers are of high tensile steel. The total weight of the 6000 pound capacity hook is just 2 1/2 pounds.



# Southern Construction Projects

## MISSOURI

(Continued from page 31)

pavt.; Bushman Construction Co., St. Joseph, \$1,133,815.

**Marion and Rails**—Proj. F-252(10)-A, Rt. 36, 2.225 mi. G.E. bridge and P.C.C. base course widening; Illinois Valley Construction Co., Ottawa, Ill., \$65,521.

**Marion and Rails**—Proj. F-252(1)-B, Rt. 36, 1.889 mi. G.E. bridge and 24-foot P.C.C. pavt.; Illinois Valley Construction Co., Ottawa, Ill., \$249,433.

**Crawford**—Proj. F1-243(3)-A, Rt. 66, 4.720 mi. G.E. and bridge and 24-foot P.C.C. pavt.; W. J. Menefee Construction Co., Sedalia, \$185,141.

**Crawford**—Proj. F1-248(8)-B, Rt. 66, 4.846 mi. G.E. and bridge and 24-foot P.C.C. pavt.; W. J. Menefee Construction Co., \$91,972.

**Buchanan**—Proj. F-318(2), Rt. 71, 4.796 mi. 24- and 22-foot asph. conc. pavt.; Land Construction Co., \$76,558.

**Clinton**—Proj. F-323(11)-B, Rt. 69, 3.785 mi. 20-foot asph. conc. pavt.; Midwest PreCote Co., \$54,481.

**Clinton**—Proj. F-323(11)-C, Rt. 69, 4.099 mi. 20-foot asph. conc. pavt.; Midwest PreCote Co., \$60,243.

**Lafayette**—Proj. F-228(7)-A, Rt. 40, 2.413 mi. widening and 24-foot asph. conc. pavt.; Midwest PreCote Co., Alt. No. 1, \$95,383.

**Lafayette**—Proj. F-228(7)-B, Rt. 40, 4.056 mi. widening and 24-foot asph. conc. pavt.; Midwest PreCote Co., Alt. No. 1, \$130,658.

**Lafayette**—Proj. F-228(7)-C, Rt. 40, 3.255 mi. widening and 24-foot asph. conc. pavt.; Midwest PreCote Co., Alt. No. 1, \$130,658.

**KANSAS CITY**—Union Wire Rope Corp. plans five new buildings, \$2,000,000.

**LEE'S SUMMIT**—Jackson County plans Hazel Grove school, \$65,700.

**NORTH KANSAS CITY**—Pittsburgh Plate Glass Co. let tentative contract to J. F. Dunn Construction Co. for new regional office and warehouse \$500,000.

**OVERLAND**—St. John's Overland Sanitary Sewer District let contract to G. L. Tarlton Contracting Co., \$143,320, for sewage treatment plant.

**PAGDALE**—Lever Brothers began work on their manufacturing center with excavation for the first unit, a \$5,000,000 plant and warehouse; while work on the Surf plant and warehouse is underway, plans will be made for erecting additional buildings to be used for making shortening and margarine.

**ROLLA**—Board of Education plans high school, \$400,000.

**ST. LOUIS**—City let contract to J. E. Latta Construction Co., \$1,034,295, for waterworks improvements, Chain of Rocks.

**ST. LOUIS**—Purcell Corp., South Gate, Calif., let contract to Robinson Construction Co. for factory and office, \$300,000.

**ST. LOUIS**—Mallinckrodt Chemical Works let contract to Dickie Construction Co. for laboratory-warehouse, \$300,000.

**ST. LOUIS**—Department of the Army, St. Louis Administration, plans \$25,000,000 Army Records Center and Army Publications Center.

**ST. LOUIS**—A. Leschen & Sons Rope Co. let contract to Frun-Conning Contracting Co. for warehouse, \$300,000.

**ST. LOUIS**—Young Women's Christian Association, Metropolitan Board, starts campaign April 1 for \$1,000,000; for YWCA buildings and improvements, consists of new Carondelet Branch Bldg., \$485,800; new St. Louis County headquarters bldg., \$115,000; Youth Center with snack bar; Kinloch Center, \$56,000; addition to Phyllis Wheatley Branch, \$229,600; swimming pool at Central Branch, \$135,100.

**ST. LOUIS**—Transport Manufacturing & Equipment Co., Kansas City, let contract to Collins Construction Co., Kansas City, for freight terminal, \$250,000.

**ST. LOUIS**—Manufacturers Railway Co. let contract to H. B. Deal & Co., Inc., for truck terminal, \$150,000.

**ST. LOUIS**—St. Louis-San Francisco Railway plans new combined office building and freight station, \$250,000.

**ST. LOUIS**—Glick Real Estate Co. plans apartment building, \$3,000,000.

**ST. LOUIS**—Joseph T. Ryerson & Son, Inc., let contract to J. S. Alberici Construction Co. for warehouse addition, \$150,000.

**UNIVERSITY CITY**—City, plans constructing, extending and improving public sewers, \$700,000.

**UNIVERSITY**—City plans spending \$175,000 for repairing and improving public buildings housing city offices; \$60,000 for building and equipping additional city library; \$120,000 for facilities for collection and disposal of garbage and refuse; \$65,000 for improving fire stations; \$75,000 for local

improvement fund; \$310,000 for public parks; \$50,000 for public building in which to house and care for city-owned motor vehicles, tools and machinery, and establishing a material yard for city purposes.

**UNIVERSITY**—City plans widening, constructing and improving public streets and bridges, \$630,000.

## NORTH CAROLINA

**BUNCOMBE COUNTY**—Local Government Commission, Raleigh, sold \$1,500,000 bond issue to R. S. Dickson & Co. & Associates for school construction.

**CAMP LEJEUNE**—Navy Department plans \$1,219,000 temporary emergency barracks, Marine Barracks.

**CAMP LEJEUNE**—Navy Department plans \$275,000 expansion of primary sewage treatment facilities, Marine Barracks, \$275,000.

**CHAPEL HILL**—University of North Carolina let contract to William Muirhead Construction Co., Durham, \$751,900, for addition to Venable Hall.

**CHARLOTTE**—Charlotte Memorial Hospital, Inc., received low bid from Goode Construction Corp., \$430,979, for addition to Charlotte Memorial Hospital, including walks, drives, equipment and appurtenances.

**EDENTON**—Navy Department plans \$2,695,000 additional station facilities.

**ELIZABETH CITY**—Board of Trustees, Elizabeth City State Teachers College, received low bid from Crain & Denbo, Inc., Durham, for fine arts building, 960 teachers' Home, \$145,650, and health center, \$114,960.

**FUQUAY SPRINGS**—Cornell-Dubiller Electric Corp., South Plainfield, N. J., plans electrical manufacturing plant, \$1,500,000.

**GASTON COUNTY**—Local Government Commission, Raleigh, sold \$600,000 bond issue to Haesey Stuart & Co. & Associates for school improvements.

**GOLDSBORO**—North Carolina Hospitals Board of Controls received low bid from T. A. Lovins & Co., Goldsboro, \$239,780, for addition to Criminal Insane.

**GREENSBORO**—Housing Authority let contract to H. L. Coble Construction Co., Greensboro, \$3,037,417, for 400-unit development.

**HAW RIVER**—Almance County plans water distribution system, \$210,000.

**HENDERSON**—Henderson and Harriet Mills plans \$2,000,000 expansion program at North and South Henderson.

**HIGH SHOALS**—Carolinian Mills, Inc., let contract to R. H. Pinnix, Gastonia, \$306,787, for weaving and spinning building.

**LINCOLN COUNTY**—Lincoln County Board of Education received low bid from Robinson Brothers Construction Co., Inc., Asheville, \$191,000, for Newbold Union School.

**LUMBERTON**—Local Government Commission plans \$450,000 water improvements.

**MARTIN COUNTY**—County School Board of Commissioners, Williamston, let contract combination bid, \$287,899, to J. L. Batton, Edenton, for three schools.

**MITCHELL COUNTY**—County Board of Education, Bakersville, let contract to W. E. Dale Construction Co., Morganton, for addition to Bakersville School, \$119,000 and \$135,000 for Tipton Hill School; Robinson Brothers Construction Co., Asheville, for Spruce Pine School, \$171,180 and \$120,230 for Buladean School.

**MOYOCK**—Local Government Commission, Raleigh, sold \$300,000 Union County Hospital bond issue to Trust Company of Georgia and Doll and Isphording, Inc.

**NORTHAMPTON COUNTY**—County Board of Education, Jackson, received low bid from J. N. Bryan & Son, Raleigh, combination bid of \$197,150 for new high school and additions to elementary school.

**RALEIGH**—State Highway Commission received low bids for projects in following counties:

**Basie**—Building strs. on 11.26 mi. of U.S. 158; W. F. Brinkley & Son Construction Co., Inc., Granite Quarry, \$86,932.

**Yadkin and Forsyth**—Bridge and approaches on relocation of U.S. 421 over Yadkin River; Bowers Construction Co., Raleigh, \$315,899.

**Alamance**—Bridge over Haw River; Roy B. Homewood, Chapel Hill, \$60,738.

**Greene**—0.445 mi. rad. pavt. and str.; Wayne Engineering & Construction Co., Inc., Mt. Olive, \$62,443 for roadway and Wainmaker & Wells, Inc., Orangeburg, S. C., \$16,777 for str.

**Halifax**—12.43 mi. grad. pavt.; Dickerson, Inc., Monroe, \$164,592.

**Lenoir**—Jones—2.88 mi. pavt.; Barrus Construction Co., Kinston, \$85,233.

**Carteret**—12.4 mi. pavt.; Barrus Construction Co., Kinston, \$67,957.

**Johnston**—12.28 mi. grad. and surf.; Wayne Engineering & Construction Co., Inc., Mt. Olive, \$120,813.

**Richmond**—50.24 mi. base and pavt. on 29 county roads and streets; Blythe Brothers Co., Charlotte, \$162,191.

**Robeson**—25.1 mi. pavt. on 9 sections of county roads; Propst Construction Co., Inc., Concord, \$165,486.

**Caldwell**—3.34 mi. grad. and pavt.; Blankenship Brothers, Charlotte, \$64,846.

**Alexander**—10.5 mi. pavt. on county roads; W. E. Graham & Sons, Cleveland, \$63,941.

**Burke**—6.81 mi. grad. and pavt.; Midstate Contractors, Inc., Hickory, \$68,727.

**Cleveland-Gaston**—11.4 mi. grad. and pavt.; E. H. Hines Construction Co., Inc., Greenwood, S. C., \$82,939.

**Iredell**—15.8 mi. pavt.; E. H. Hines Construction Co., Greenwood, S. C., \$83,735.

**McDowell**—9.94 mi. grad. and pavt.; Taylor Construction Co., Asheville, \$11,648.

**Rutherford**—8.1 mi. grad. and pavt.; A. R. Thompson Contractor, Inc., Rutherfordton, \$112,641.

**ROANOKE RAPIDS**—Virginia Electric and Power Co., Richmond, Va., issued license by Power Commission to build and operate a \$27,000,000 hydro-electric project on the Roanoke River; seeking license to build at Gaston, N. C.

**ROCKINGHAM**—City School Board let contract to Barger Construction Co., Mooresville, \$389,400, for elementary school.

**THOMASVILLE**—Board of Trustees, City Memorial Hospital, received low bid from Cottrane & Graham Construction Co., High Point, \$346,650, for addition.

## OKLAHOMA

**CHOTEAU**—Coronado Paper Co. let contract to Tankersley Construction Co., Oklahoma City, \$4,000,000 for paper plant.

**FORT GIBSON**—Corps of Engineers, Tulsa, let contract to M. E. Gillioz, Monet, Mo., \$352,353, for relocating U.S. Hwy. No. 69, Fort Gibson Dam.

**NORMAN**—University of Oklahoma let contract to Manhattan Construction Co., Muskogee, \$1,898,675, for men's dormitory.

**OKLAHOMA CITY**—State Highway Commission let contracts for projects in following counties:

**Cleveland**—U.S. 77, 2.989 mi. roadbed of variable width for 2 24-ft. traffic lanes, bridge; G. I. Construction Co., Meeker, \$108,436.

**Cleveland**—Proj. F1-380(1), U.S. 77, 2.707 mi. same type construction and 3 bridges; G. I. Construction Co., \$213,870.

**Cleveland**—U.S. 77, 3.448 mi. 36-ft. roadbed and bridge; Smith Brothers, Noble, \$66,180.

**Creek**—SAP-48(1), U.S. 75, 0.077 mi. 32-ft. roadbed, 8-in. conc. pavt. on 8-in. sand cushion, 40-ft. I-beam span extension to bridge and detour bridge at Rock Creek, So. Main St. Sapulpa; Henryetta Construction Co., Henryetta, \$55,910.

**Watson**—SAP-44(24), S.H. 51, 6.101 mi. 10-in. slab, aggr. base, 24-ft. double bitum. pavt., 5-ft. aggr. sloping shoulders 10 to 5 in. sloping shoulders, single bitum. pavt.; Perk-Ward Co., Oklahoma City, \$126,822.

**Logan**—S.H. 51, 6.660 mi. 5-in. asph. slab, base 24-ft. single bitum. pavt., 4-ft. primed sloping shoulders; G. I. Construction Co., \$133,869.

**Logan**—S.H. 51, 5.935 mi. same type construction; G. I. Construction Co., \$121,800.

**Climmeron**—Proj. SAP-1063(3), U.S. 64, 7.905 mi. 36-ft. roadbed; W. D. Fulton Construction Co., Oklahoma City, \$58,627.

**OKLAHOMA CITY**—State Highway Department plans work in following counties for 1951:

**Rogers**—8 mi. roadbed, widening, pavt. Claremore to Verdigris River, 0.66, 1.00, same type construction, Catosa to junction of S.H. 33, \$200,000.

**Tulsa**—1.5 mi. roadbed, pavt. from 51st street to Turner turnpike, \$200,000, 2.5 mi. roadbed, pavt. from 51st street bridge to new U.S. 66, \$1,500,000.

**Oklahoma**—3 mi., 4-lane roadbed, pavt. from Classen Blvd. to May Ave., \$1,000,000.

**Creek**—Railway overpass west of Sapulpa, \$100,000.

**OKLAHOMA CITY**—City sold \$8,847,000 in bonds to syndicate headed by Kuhn-Loeb Co., New York, N. Y.; includes \$5,048,000 for water works; \$1,040,000, sanitary sewers; \$710,000, storm sewers; \$759,000, library; \$115,000, park; and \$775,000, sewer park.

**PRYOR**—National Gypsum Co. let construction



tract to Ditmar, Dickmann and Pickens Construction Co., Muskogee, \$4,000,000 for paper plant.

**TULSA** — Y.M.C.A. plans building, \$1,850,000.

## SOUTH CAROLINA

**AIKEN** — Green Construction Co., Oaktown, Ind., awarded sub-contract for grading for H-Bomb Plant, Aiken-Barnwell Counties for U. S. Atomic Energy Commission, \$280,000, 000.

**ANDREWS** — Berkshire Knitting Co. let contract to C. M. Juest & Sons, Anderson, for hosiery mill, \$3,000,000.

**COLUMBIA** — State Highway Department let contracts for projects in following counties:

**Aiken** — S.C. Doc. No. 2,291, F.A. Proj. FG-1431(6), 162-ft. reinf. conc. bridge over Southern Railroad with 0.083 mi. earth graded (widened) approaches and also 164.5 ft. untreated timber detour bridge; Frank W. LaMotte, Columbia, \$51,618;

**Charleston and Colleton** — S.C. Doc. 1015,221, F.A. Proj. F-5332(1), Rt. 17, 684 ft. reinf. conc. and struc. steel bridge over Edisto River with 0.255 mi. graded and asph. conc. surf. approaches and widening 110-ft. bridge over Edisto River Swamp near Jacksonville; Joseph W. Barnwell, Jr., \$172,303;

**Lee and Sumter** — S.C. Doc. Nos. 3143,225 and 33,276, F.A. Proj. F-12(5), U.S. Rt. 76, 2 120-ft. reinf. conc. bridges with 0.418 mi. approaches over Rocky Bluff Swamp and detour road with 2 detour bridges; widening 3 triple box culverts and 240-ft. bridge with 0.570 mi. earth graded approaches over Scape Ore Swamp, also 2 120-ft. reinf. conc. bridges with 0.598 mi. earth graded approaches over Black River and detour road with 2 detour bridges near Mayesville; McMeekin Construction Co., Cheraw, \$167,000;

**Aiken** — S.C. Doc. Nos. 2,303 Pts. 1-4 and 2,304, S.C. Proj. AA-1(1) and F.A. Proj. F-1431(7); grad., drain, and asph. conc. surf. 10.9 mi. on Rds. 120, 147 and 198, including 2 bridges at Hollow Creek; 5.0 mi. on connection from U.S. Rt. 1 at end of present divided highway including 190-ft. R.C. bridge over Southern Railroad and 240-ft. R.C. bridge over Horse Creek; 1.5 mi. on U.S. Rt. 1 at end of 4-lane divided hwy.; grad., drain, and asph. conc. surf. 2.5 mi. on Rt. 125 and Rds. 125, 18 in 198; widening and resurf. with asph. conc. 1.3 mi. on Rt. 28; R. B. Potashnick, Cape Girardeau, Mo., \$2,038,274, Alt. 2;

**Allendale** — S.C. Doc. Nos. 3,257, 3,259 and 3,266, grad. and bitum. surf. 3,150 mi. on Rds. 52 and 59, 2,050 mi. on Rds. 53 and 5,058 mi. on Rds. 49, 41 and 91; J. F. Cleckley & Co., Orangeburg, \$81,715, Alt. No. 2 and Alt. No. 4;

**Anderson** — S.C. Doc. Nos. 4,345, 4,346, 4,347, Parts 1&2 and 4,350, F.A. Proj. S-546(1), grad. and bitum. surf. 1,238 mi. on Rd. 171, 2,133 mi. on Rd. 147, 5,272 mi. on Rds. 96 and 144, 2,793 mi. on Rd. 164 and 2,059 mi. on Rd. 165; Reeves Brothers Construction Co., Inc., Easley, \$137,465, Alt. No. 2;

**Charleston** — S.C. Doc. 10343 Pts. 1, 2, 3, & 4, F.A. Proj. Nos. S-557(1), S-558(1), S-559(1) and S-559, grad. and bitum. surf. 1,642 mi. on Rd. 275, 2,998 mi. on Rd. 38, 2,224 mi. on Rd. 317 and 2,104 mi. on Rd. 316; Banks Construction Co., Naval Base, \$142,870;

**Marion** — S.C. Doc. Nos. 34,233-2 Parts 1 & 2 and 34,245, F.A. Proj. U-171(4), U.S. Rt. 76 and 501, grad., widen. and surf. with asph. conc. and bitum. surf. and curb and gutter and sidewalks 1,611 mi. on U.S. Rt. 76 and 0.392 mi. on U.S. Rt. 501; Hubbard Construction Co. of South Carolina, Inc., Marion, \$233,644;

**Marlboro** — S.C. Doc. 35,284-2 Parts 1 & 2, F.A. Proj. F-2552(2), grad. and bitum. surf. 3,266 mi. U.S. Rt. 15 (by-pass); Wilson Construction Co., Marion, \$130,758, Alt. No. 1; and \$137,312, Alt. No. 2;

**Newberry** — S.C. Doc. Nos. 36,249 and 36,253, grad., drain, and bitum. surf. 5,320 mi. on Rd. 63; Davis Moragne, Columbia, \$72,713, Alt. No. 2; and Spotts & Co., Newberry, \$78,519, Alt. No. 4;

**Orangeburg** — S.C. Doc. Nos. 38,356, 38,359, Parts 1&2 and 38,360, F.A. Proj. S-547(1), grad., drain, and bitum. surf. 5,444 mi. on Rt. 267, 2,491 mi. on Rd. 105, 2,145 mi. on Rds. 68 and 171; J. F. Cleckley & Co., Orangeburg, \$87,010, Alt. No. 2;

**Pickens** — S.C. Doc. 39,287-2 Parts 1 & 2, F.A. Proj. F-25910, Parts 1 & 2, grad., drain, macadam base and asph. conc. surf. 7,024 mi. on U.S. Rt. 123; Reeves Brothers Construction Co., Easley, \$409,953, Alt. No. 2; and E. H. Hines Construction Co., Inc., Greenwood, \$436,509, Alt. No. 2, bitum. surf. with seal, with cement rubble masonry gutter.

**COLUMBIA** — State Highway Department received low bids for projects in following counties:

**Chester** — Rt. 901, 331-ft. reinf. conc. struc.

steel and creosoted timber bridge over Rocky Creek; F. A. Triplett, Inc., Chester, \$60,267;

**McCormick** — Rt. 43, 230-ft. reinf. conc. bridge over Hard Labor creek with 0.614 mi. earth graded and bitum. surf. approaches and 210-ft. reinf. conc. bridge over Duffeytown Creek with detour road and detour bridge near McCormick; C. Y. Thomason Co., \$107,635;

**Horry** — Rd. 78, grad., drain, and bitum. surf., 8,127 mi.; Mid-State Construction Co., Batesburg, \$120,076;

**Marion** — S.C. Rt. 701, grad., asph. conc. surf. and conc. curb and gutter and sidewalk 0.487 mi. in city of Conway; Wilson Construction Co., Marion, \$38,769;

**Marion** — U.S. Rt. 29, grad., drain, macadam and asph. conc. surf. 9.179 mi.; E. H. Hines Construction Co., Inc., Greenwood, \$692,294;

**Williamsburg** — Rds. 116, 122, 42 and 25, grad. and bitum. surf., 2,527 mi. on Rd. 116, 2,408 mi. on Rd. 122, 3,248 mi. on Rd. 42 and 3,926 mi. on Rd. 25; Robert Lee, Inc., Manning, \$127,118;

**HARLEYVILLE** — Grant Portland Cement Co. applied to National Security Resources Board for certificate of necessity for expansion facilities, \$2,000,000;

**LAKE CITY** — Wentworth Manufacturing Co., Inc., Fall River, Mass., plans plant, \$300,000.

**CHATHAM AUGUSTA** — City plans additions to waterworks system, \$488,900.

**PARRIS ISLAND** — Navy Department plans \$807,000 temporary emergency barracks, Marine Corps Recruit Depot.

## TENNESSEE

**CLARKSVILLE** — Housing Authority let contract to Clark Construction Co., Owensboro, \$1,741,203 for low rent housing project.

**CHATTANOOGA** — City Commission plans \$2,500,000 bond issue to finance building of 12-grade negro school and seven more school buildings.

**CHATTANOOGA** — The Wheland Co. plans \$15,000,000 plant for manufacture of guns.

**KNOXVILLE** — Board of Education let contract to Emory and Richards, \$282,185, for Knoxville Catholic High School.

**KNOXVILLE** — McLellan Stores Co. plans addition to Gay Street store, \$500,000.

**KNOXVILLE** — Board of Education received low bid from Daugherty & Waters, \$769,245, for negro high school.

**MEMPHIS** — Navy Department plans \$6,020,000 additional facilities, Naval Air Training Center.

**MEMPHIS** — Kimberly-Clark Corp. plans expansion, part of a \$20,000,000 program.

**OAK RIDGE** — U. S. Atomic Energy Commission received low bid from V. L. Nicholson Co., Knoxville, \$916,986, for high voltage laboratory.

**OAK RIDGE** — U. S. Atomic Energy Commission let contract to Maxey & Lettlich, Lubbock, Tex., \$330,225, for K-25 laboratory building.

**SEAWANEE** — University of the South received low bid from J. Jones Construction Co., Atlanta, Ga., \$488,750, for dormitory and dining hall.

**SPRINGFIELD** — Robertson County plans sanitary sewer lines and treatment plant, \$465,000.

**TULLAHOMA** — U. S. Engineer Office received low bid from Robert E. Maxey Construction Co., Lubbock, Tex., \$2,587,447, for administration and engineering building, Arnold Engineering Development Center.

**TULLAHOMA** — Corps of Engineers received low bid from Robert E. Maxey, Lubbock, Tex., \$286,800, for electric distribution control building, Arnold Engineering Development Center.

**TULLAHOMA** — U. S. Engineer Office let contract to C. F. Rule Construction Co., Nashville, \$694,045, for maintenance shop, Arnold Engineering Development Center.

## TEXAS

**AMARILLO** — U. S. Government, District Engineer, Tulsa, Okla., plans streets, roads and utility systems for Amarillo Air Force Base, \$660,000 for new roads and \$6,000,000 for utilities.

**AMARILLO** — House Armed Services Committee approved allocation of \$15,800,000 for expansion of Amarillo Air Force Base.

**AUSTIN** — State Highway Commission let contracts for projects in following counties:

**Goliad** — Cont. R-691-3-1, Hwy. FM 1351, 6,125 mi. grad., strs., base and surf.; J. M. Dellinger, Inc., Corpus Christi, \$52,600;

**Bandera** — Cont. R-855-4-1, Hwy. FM 1336, 7,777 mi. grad., strs., base and surf.; R. I. C. Contractors, Bandera, \$54,935;

**Comal** — Cont. R-1121-1-1, Hwy. FM 747, 6,924 mi. grad., strs., base and surf.; Howard Brothers, Madisonville and R. B. Butler, Inc., Bryan, \$84,796;

**Kinney** — Cont. R-876-2-3, Hwy. FM 334,

(Continued on page 34)

## Louisiana Road Opening Results in \$426,285 Bids

Low bids totaling \$426,285.85 were received February 14 by the Louisiana State Highway department. They follow, listed by parishes:

**Livingston** — Purchase Requisition Nos. 28050A and 43351A, furnishing washed gravel spot-dumped on various state routes: Items 1 and 4, Louisiana Sand and Gravel Co., Baton Rouge, La., \$6,835; Items 2 and 3, Independence Sand and Gravel Co., Independence, La., \$5,866; Items 5, 6, 7, 8, 9 and 10, Amite Sand and Gravel Co., Inc., Baton Rouge, La., \$6,269;

**Orleans** — State Route No. 996, furnishing clam shell spot-dumped: Jahnecke Service, Inc., New Orleans, La., \$82,938;

**Lafayette** — State Route No. 236, furnishing base course shell or as alternate base course gravel (Grade A) spot-dumped on Erath-Youngsville Highway: Alexandria Gravel Co., Alexandria, La., \$102,711;

**Tangipahoa** — Purchase Requisition No. 28048A, furnishing washed gravel spot-dumped on various state routes: Anderson Gravel Co., Amite, La., \$27,230;

**Lafayette** — State Project No. 703-07-74, 5.045 miles drainage structures and gravel surface course, Scott-North Highway: Harkins Contracting Co., Lafayette, La., \$24,185;

**Winn** — State Project No. 361-04-04, State Route No. C-1479, furnishing base course gravel (Grade A) or as alternate base course iron ore (Grade A) spot-dumped on Montgomery-Atlanta Highway: Forcum-James Co., Baton Rouge, La., \$24,347;

**Vermilion** — State Project No. 216-01-02, State Route No. 148, furnishing base course shell or as alternate base course gravel (Grade A) spot-dumped on Erath-Youngsville Highway: Alexandria Gravel Co., Alexandria, La., \$145,902;

**Assumption** — State Project No. 64-09-05, State Route No. 29, furnishing bridge material delivered to Cantine Canal bridge site on Napoleonville-Thibodaux highway; no bids received;

**Bossier** — State Project No. 881-01-04, Contract No. 4, drilling water well complete at Fourth District headquarters, Bossier City; no bids received.

## Cold Rubber Output Boosted in Texas

Production of cold rubber at the Port Neches, Texas, plant B. F. Goodrich Chemical Company operates for the government will be increased 50 per cent within 60 days, says W. I. Burt, vice president-manufacturing.

The government has authorized installation of refrigeration equipment costing \$350,000 to expand cold rubber production from 30,000 to 45,000 tons of the plant's 60,000-ton annual rated capacity. At present, he pointed out, the Port Neches units are operating in excess of 135 per cent of their rated capacity.

The B.F.G. Chemical company plant is the first government-owned, industry-operated man-made rubber facilities to receive authorization to increase the nation's cold rubber supply.

# Southern Construction Projects

## TEXAS

(Continued from page 33)

10,252 ml. grad., drain, str., found, course and 1-course surf. treat.; Holland Page, Austin, \$66,970.

**Williamson**—Cont. R-1202-3-1, Hwy. FM 1331, 5,785 ml. grad., str., found, course and 2-course surf. treat.; Cage Brothers, San Antonio, \$75,895.

**Tarrant**—Cont. 1068-1-4, Fed. Proj. U1-1062(4), Hwy. SH 550, 1,984 ml. conc. pvt.; Worth Construction Co., Fort Worth, \$787,124.

**Tarrant**—Cont. 1068-1-5, Fed. Proj. U1-1062(5), Hwy. SH 550, 1,504 ml. conc. pvt.; Texas Bitulithic Co., Dallas, \$783,650.

**Dallas**—Cont. 197-2-14, Fed. Proj. F-860(8), Hwy. U.S. 175, 2 ml. conc. pvt.; Austin Road Co., Dallas, \$99,268.

**Crockett**—Cont. 558-10-2, Fed. Proj. S-1193 (3), Thomas & Ratliff, Rogers, \$164,664.

**Fort Bend**—Cont. 1258-3-4, Fed. Proj. S-85(3), Hwy. FM 1093, 3,849 ml. grad., str., base and surf.; J. F. Buckner & Sons, Cleburne, \$75,471.

**Ward**—Cont. 1001-2-1 & 1184-2-1, Fed. Proj. S-487(3) and S-1219(1), Hwy. FM 516 and 873, 8,094 ml. grad., str., base and surf.; Hugh McMillan, El Paso, \$64,560.

**Potter**—Cont. 90-5-11, Fed. Proj. F1-643(10), Hwy. U.S. 66, 9,240 ml. grad. and str.; Ivan Dement, Amarillo, \$68,561.

**Live Oak and McMillan**—Cont. 542-6-65-3-61, Fed. Proj. S-413(4) & (4), Hwy. SH 202, 8,309 ml. grad., str., found, course and 2-course surf. treat.; Cage Brothers, San Antonio, \$148,058.

**Galveston**—Cont. V-976-3-3, Hwy. FM 518, 9,448 ml. grad., str., base and surf.; R. B. Smith, Inc., Houston, \$291,361.

**Hunt**—Cont. V-1087-3-1, Hwy. FM 1563, 5,672 ml. grad., str., base and surf.; J. F. Buckner & Sons, Cleburne, \$114,376.

**Austin**—Cont. R-1411-2-1, Hwy. FM 1457, 4,839 ml. grad., str., base and surf.; Thomas & Ratliff, Rogers, \$114,376.

**Mills and Hamilton**—Cont. R-1028-2-2, R-120-4-1 & R-12-5-2, Hwy. FM 572, & FM 218, 6,751 ml. grad., drain, str., found, course and 1-course surf. treat.; A. L. Bucy, Brownwood, \$54,894.

**Gray**—Cont. 2, 319-4-2, Hwy. FM 749, 5,941 ml. grad., drain, str., found, course and 1-course surf. treat.; Ernest Loyd, Fort Worth, \$66,427.

**Montague**—Cont. R-137-12-1, Hwy. FM 1233, 5,413 ml. grad., str., base and surf.; McDonald Construction Co., Dallas, \$54,541.

**Martin**—Cont. R-1369-1-1 & R-1521-1-1-1, Hwy. FM 1212, 6,182 ml. grad., str., base and surf.; Strain & Brown, San Angelo, \$39,775.

**Jones**—Cont. R-484-1-2, Hwy. FM 1227, 7,933 ml. grad., str., found, course and 1-course surf. treat.; Harry Campbell, Tyler, \$68,562.

**Brazoria**—Cont. R-1414-3-1, Hwy. FM 1462, 14,350 ml. grad., str., flex, base and 1-course surf. treat.; South Texas Construction Co., Corpus Christi, \$267,370.

**Hastrop**—Cont. R-573-1-1, Hwy. FM 1319, 7,454 ml. grad., str., base and surf.; Thomas & Ratliff, Rogers, \$120,898.

**Austin**—Cont. S-5141-1, R-527-3-1, Hwy. FR 38 & FM 1450, 4,967 ml. grad., str., base and surf.; Thomas & Ratliff, Rogers, \$85,091.

**McCulloch**—Cont. R-129-1-5 & S-825-2-11, Hwy. FM 1311 & 42, 11,967 ml. grad., str., base and surf.; Thomas & Ratliff, Rogers, \$85,091.

**Burleson**—Cont. R-1399-1-1, Hwy. FM 1361, 5,129 ml. grad. and str.; Thomas & Ratliff, Rogers, \$63,584.

**Dimmitt and Zavala**—Cont. R-1424-2-1, Hwy. FM 1433, 8,480 ml. grad., str., flex, base and 1-course surf. treat.; Holland Page, Austin, \$71,901.

**Red River**—Cont. 427-2-1 & R-427-2-2, Fed. Proj. S-1364(1), Hwy. FM 1158, 3,804 ml. grad., str., base and surf.; John F. Buckner & Sons, Cleburne, \$60,920.

**Colorado**—Cont. R-1439-2-1 & F-211-103, Hwy. FM 12 & 135, 8,156 ml. grad., str., base and surf.; Holland Page, Austin, \$84,176.

**Comanche**—Cont. R-1039-2-1 & R-1366-1-1, Hwy. FM 1476 & 1477, 7,154 ml. grad., str., base and surf.; Harry Campbell, Fort Worth, \$64,108.

**Wise**—Cont. R-1179-1-2, Hwy. FM 920, 12,220 ml. grad., str., base and surf.; Cage Brothers, San Antonio, \$139,623.

**Hunt**—Cont. 9-14-15-3-63, Fed. Proj. F-800 (5) & F1-800(6), Hwy. U.S. 67, 8,228 ml. conc. pvt., roadbed treat. and flex, base shoulders; General Construction Co., Fort Worth, \$1,158,148.

**Denton**—Cont. 125-10-7, Fed. Proj. F-756 (13), Hwy. SH 24, 10,618 ml. conc. pvt., stab, base and 2-course surf. treat.; Austin Road

Co., Dallas, \$380,135.

**Hunt**—Cont. C-174-1-14, Hwy. SH 34, 6,196 ml. widening and strengthening existing base and 2-course surf. treat.; L. H. Lacy Co., Dallas, \$130,502.

**Rusk**—Cont. R-545-5-3, Hwy. FM 839, 6,463 ml. grad., str., base and surf.; Howard Brothers & R. B. Butler, Inc., Bryan, \$68,223.

**Karnes**—Cont. R-1204-1-1, R-1422-1-1 & R-1123-2-1, Hwy. FM 885, 1354 & 81, 11,244 ml. grad., str., found, course and 2-course surf. treat.; Dudley R. Cloud, San Antonio, \$104,793.

**Monard and Kimble**—Cont. R-129-3-1 & R-129-4-1, Hwy. FM 1221, 13,208 ml. grad., str., base and surf.; Killian-Keller Co., San Antonio, \$134,639.

**Bosque and Hill**—Cont. C-519-342-1-2, Hwy. SH 353, 4,213 ml. grad., str., and road-bed treat.; Harry Campbell, Fort Worth, \$202,251.

**Orange**—Cont. 28-11-32, Fed. Proj. F1-149 (7), Hwy. U.S. 90, 2,544 ml. grad., str., and conc. pvt.; Harrison Engineering Construction Corp., Kansas City, Mo., \$381,363.

**Grayson**—Cont. 81-10-1, Fed. Proj. S-1257 (1), Hwy. FM 904, 4,090 ml. grad. and drain, str.; Austin Bridge Co., Dallas, \$73,108.

**Smith**—Cont. 520-6-6, Fed. Proj. F-652(14), Hwy. SH 155, 6,527 ml. flex, base and 1-course surf. treat.; H. L. Butler & Sons, Dallas, \$72,822.

**Smith, Henderson and Anderson**—Cont. 520-6, 7-68, & 7, Fed. Proj. F-652(15), Hwy. SH 155, 7,730 ml. base and 1-course surf. treat.; Dew Construction Co., Inc., Tyler, \$100,694.

**Tarrant**—Cont. 1068-1-3, Fed. Proj. U1-1082 (3), Hwy. SH 550, 0.129 ml. underpass and approaches; Texas Bitulithic Co., Dallas, \$379,831.

**Gregg**—Cont. 945-4-1, Fed. Proj. S-1512(1), Hwy. SH 259, 1,880 ml. grad. and 1-course surf. treat.; L. W. Felphrey Co., Gladewater, \$250,423.

**AUSTIN**—State Highway Department received low bids for projects in following counties:

**Ector**—Proj. R-1367-1-1, Hwy. FM 1210, grad., str., base and surf.; J. R. Fanning, Lubbock, \$65,875.

**Henderson**—Proj. R-697-2-3 and R-1393-1-1, Hwy. FM 85 and 1250, grad., str., base and surf.; R. N. Adams, Kaufman, \$95,264.

**Grayson**—Proj. Cont. R-202-8-2, Hwy. FM 120, grad., str., base and surf.; H. L. Butler & Son, Dallas, \$61,991.

**Frio**—Proj. RV-1499-1-1, Hwy. FM 1581, grad., str., base and surf.; Schwepke Brothers, San Antonio, \$56,000.

**Bowie**—Proj. R-1381-1-1, Hwy. FM 1308, grad., str., base and surf.; McMillin-Burkett Construction Co., Texarkana, \$68,898.

**Correll and Hamilton**—Proj. C-55-3-2-6-6-6, Hwy. U.S. 84, flex, base and 2-course surf. treat.; Cage Brothers, San Antonio, \$149,649.

**Gonzales**—Proj. R-1424-2-1 & R-1424-2-1, etc., Hwy. SH 3, 29, 72, 200, 119, and U.S. 87, seal coat; D & H Construction Co., Dallas, \$77,689.

**Fort Bend**—Proj. R-543-3-2, Hwy. FM 762, grad., str., base and surf.; Brown & Root, Inc., Houston, \$72,366.

**Guadalupe**—Proj. F-35(3), Hwy. SH 3, 5 bridge and incidental grad.; Norman L. Larson, Austin, \$126,948.

**Leon**—Proj. V-1147-1-1, Hwy. FM 977, grad. and struc.; J. R. Gannon & R. D. Kitchens, Austin, \$81,624.

**Panola**—Proj. R-394-3-1, Hwy. FM 1401, grad., str., base and str.; Dew Construction Co., Tyler, \$156,397.

**Hunt**—Proj. R-1463-1-1 and R-1203-2-1, Hwy. FM 1532 and 904, grad., str., base and surf.; R. W. McKinney, Nacogdoches, \$135,826.

**El Paso**—Proj. F-439(19), Hwy. U.S. 80, grad., str., conc. pvt. and Main St. viaduct; Western Construction Co., Inc., El Paso, \$539,211.

**Rusk and Panola**—Proj. F-650(11) and (12) and C-139-4-1, SH 149 and Spur 152, flex, base and 2-course surf. treat.; R. C. Buckner, Jacksonville, \$112,096.

**Angelina**—Proj. F-277(7), Hwy. U.S. 69, grad., str., and conc. pvt.; Austin Road Co., Dallas, \$434,379.

**Upton**—Proj. S-1228(1), Hwy. FM 370, grad., str., base and surf.; M. E. Ruby & W. L. Barnes, San Marcos and Austin, \$74,498.

**Caldwell**—Proj. R-1375-2-1, Hwy. FM 1322, grad., str., base and surf.; M. E. Ruby, San Marcos, \$54,193.

**Dallas**—Proj. 1141-1-1 & V-790-1-3, Hwy. FM 296, grad., str., base and surf.; Ernest Loyd, Fort Worth, \$158,484.

**Hudspeth**—Proj. R-957-1-2, Hwy. FM 192, grad., str., base and surf.; Hugh McMillan, El Paso, \$92,264.

**Brazoria**—Proj. R-1003-1-7 & V-1003-1-5, Hwy. FM 523, grad., str., base and surf.; Southern Contracting, Austin, \$166,901.

**McCulloch**—Proj. S-1434(1), Hwy. FM 1028, grad., str., base and surf.; J. W. Perry, San Antonio, \$31,048.

**Hill**—Proj. S-1499(1), Hwy. FM 934, grad., str., base and surf.; Ernest Loyd, Fort Worth, \$80,151.

**Cooke**—Proj. F1-597(10) & F-595 (19), Hwy. U.S. 77 and 82, conc. pvt.; Harrison Engineering & Construction Co., Kansas City, Mo., \$520,307.

**Mitchell**—Proj. S-1187(7), Hwy. SH 101, grad., str., find, course and 1-course surf. treat.; Fred Hall and Son, Valley Mills, \$163,362.

**San Augustine**—Proj. F-327(10), Hwy. U.S. 96, grad. and small str.; W. R. Boyd, Cushing, \$121,163.

**Franklin and Titus**—Proj. R-221-4-1 & F-227 (7), Hwy. U.S. 271, base and surf.; L. W. Felphrey, Gladewater, \$81,423.

**Grayson**—Proj. R-1379-1-1, Hwy. FM 1282, grad., str., base and surf.; H. L. Butler & Son, Dallas, \$78,669.

**Camp**—Proj. V-1232-3-1 & V-1473-2-1, Hwy. FM 1520 and 1521, grad., str., base and surf.; Dave McCulloch, Pittsburgh, \$69,902.

**Hansford**—Proj. R-1336-1-2 & RV-1336-1-1, Hwy. FM 1262, grad., str., base and surf.; Cooper & Woodruff, Dallas, \$181,631.

**Gonzales**—Proj. R-715-2-1 & R-681-1-3, Hwy. FM 108 & 77, grad., str., base and surf.; D. R. Cloud & Son, San Antonio, \$180,406.

**El Paso**—Proj. C-1-1-12, Hwy. U.S. 80, flex, base shoulders and hot mix asphalt, conc. pvt.; Hugh McMillan, El Paso, \$125,221.

**Haskell**—Proj. R-1359-1-1, Hwy. FM 1225, grad., str., base and surf.; Stone Construction Co., Ardmore, \$72,452.

**Hidalgo**—Proj. R-1064-1-3 and R-862-2-1, Hwy. FM 676 and 1427, grad., str., base and surf.; E. B. Darr, El Paso, \$80,870.

**Hemphill**—Proj. F-621(8) & F-595(10), Hwy. U.S. 60 and 83, Canadian River bridge and roadway approaches; Austin Bridge Co., Dallas, \$947,740.

**Freestone**—Proj. F-78(4), Hwy. U.S. 75, widening bridge and approaches; Russell Smith, Dallas, \$137,085.

**CORPIN**—City plans water plant, \$2,000,000.

**BEAUMONT**—Housing Authority plans negro low rent housing project, \$1,000,000.

**BIG SPRING**—Colorado River Municipal Water District received low bid from J. W. Moorman & Sons, Wylie, \$1,452,877, for earthen dam.

**BIG SPRING & ODESSA**—Colorado River Municipal Water District let contract to McKenzie Construction Co., San Antonio, and Dallas and Ben Silva & Co., Dallas, \$3,971,500, for water supply lines.

**CORPUS CHRISTI**—Reservoir for Big Spring; Section 2, supply line from Big Spring to Martin County well field; Section 3, supply line from Martin County well field to Odessa.

**BRYAN**—House Armed Services Committee approved allocation of \$6,200,000 for expansion of Bryan Air Force Base.

**CORPUS CHRISTI**—Reynolds Metals Co., Louisville, Ky., plans \$80,000,000 aluminum reduction plant, San Patricio County, Corpus Christi.

**CORPUS CHRISTI**—Navy Department plans \$5,206,000 additional aviation facilities, Naval Air Station.

**DALLAS**—Lone Star Steel Co. let contract to Brown & Root, Inc., Houston, \$875,000, for new 73,500,000 steel plant; American Bridge Co., Chicago, Ill., \$3,155,298, for erection and fabrication of major buildings; Morgan Engineering Co., Alliance, Ohio, \$2,285,644, for purchase of various heavy-duty cranes.

**DALLAS**—Republic National Bank plans 40-story, \$17,500,000 building.

**DALLAS**—Dallas County and City of Dallas plan 10-story City-County Hospital, \$6,500,000.

**FORT WORTH**—Continental National Bank let contract to Butcher & Sweeney, \$3,000,000.

**FORT WORTH**—Corps of Engineers plans powerhouse and switchyard, \$42,000,000, Whitney Dam and Reservoir project.

**FORT WORTH**—Whitesettlement School District plans high school and elementary schools, \$1,200,000.

**FREERPORT & VELASCO**—Dow Chemical Co. Freeport, let contract to Stone & Webster Engineering Corp., Houston, \$10,000,000, for additions to chemical plants, Freeport and Velasco.

**HOUSTON**—Harris County Navigation Port Commission, will select site soon for wharf \$1,500,000.

**HOUSTON**—Harris County Water Control & Improvement District No. 21 received low bid from George Construction Co., Hous-

ton, on Contract No. 1, water system \$348,327; Layne-Texas Co., Houston, Contract No. 2, water wells, \$26,312 and \$25,807; Chicago Bridge & Iron Co., Houston, on Contract No. 4, ground storage tank, \$14,580; Contract No. 5, sewer systems, Century Construction Co., \$279,925; George Kennedy, Contract No. 6, sewer plant, \$79,500.

**KINGSVILLE** — Navy Department plans \$1,100,000 additional aviation facilities, Naval Auxiliary Air Station.

**LOUISIANA** — Lone Star Steel Co. received low bid from Brown & Root, Inc., Houston, for new \$73,500,000 steel mill.

**LUBBOCK** — Western Cotton Oil Co., subsidiary of Anderson-Clayton & Co., let contract to Brown & Root, Inc., Houston, for cotton oil mill, \$2,000,000.

**NORFOLK** — Norfolk Redevelopment and Housing Authority let contract to John A. Johnson and Sons, Inc., Washington, D. C., \$2,597,000, for 428-unit public unit housing development, Va.

**PASADENA** — Pasadena Independent School District plans school improvements, \$2,075,000.

**PORT ARTHUR** — Gulf Oil Corp. plans ethylene plant, \$10,000,000.

**PORT ARTHUR** — Koppers Co., Inc., Pittsburgh, Pa., plan chemical plant, \$6,500,000.

**SAN ANTONIO** — Housing Authority received low bid, \$2,037,447, for housing project for Latin-Americans from R. F. Ball Construction Co., Houston, Tex.

**VICTORIA** — Victoria Bank & Trust Co. plans 8-story bank building, \$1,500,000.

**WACO** — House Armed Services Committee approved allocation of \$5,000,000 for expansion of Connally Air Force Base.

**WACO** — U. S. Government plans 500 military housing units, Air Force personnel, \$4,000,000.

**WICHITA FALLS** — House Armed Services Committee approved allocation of \$14,400,000 for expansion of Sheppard Air Force Base.

**WICHITA FALLS** — District Engineer, Tulsa, Okla., plans 612 dwelling units, Sheppard Air Force Base, \$5,500,000.

## VIRGINIA

**VIRGINIA** — State Highway Commission, Richmond, announced tentative allocations of \$27,342,953, for Virginia's 9,000-mile primary highway system during fiscal year beginning July 1.

**VIRGINIA** — Old Dominion Turnpike Corp., Richmond, plans \$50,000,000 turnpike across southwest Virginia from West Virginia to North Carolina, to be known as Old Dominion Turnpike, spanning Bland, Wythe and Carroll Counties.

**VIRGINIA** — State Highway Department, Richmond, announced \$7,842,405, was allocated for highway construction for year ending June 30, 1951.

**Bedford and Botetourt Counties** — Bureau of Public Roads, Arlington, received low bid from Adams & Tate Construction Co., Roanoke, \$336,100, for Blue Ridge Parkway.

**HERBYVILLE** — Board of Education received low bid from H. W. Aikens, Clearbrook, \$161,650, for addition to Johnson-Williams School.

**CHARLOTTE COUNTY** — County Board of Education, Charlotte, let contract to John W. Daniel & Co., Danville, \$146,050, for colored elementary school.

**CREW** — Southside Electric Cooperative plans 422 miles of distribution line, system improvements, and completion of construction having prior approval \$1,050,000.

**FALLS CHURCH** — Virginia State Board of Education plans senior high school, \$889,981.

**FENTRESS** — Navy Department plans \$1,170,000 additional aviation facilities, Naval Auxiliary Air Station.

**FREDERICKSBURG** — Federal Housing Administration let contract to Trice Construction Co., Richmond, for 430 apartment units, for Quantico Marine Corps base personnel, \$3,500,000.

**FREDERICKSBURG** — Mary Washington College received low bid from Irons & Key, Alexandria, Washington, D. C., \$687,500, for physical education and classroom building.

**GILMERTON** — Virginia Electric & Power Co. Directors authorized immediate construction of a new \$17,000,000 steam electric generating station.

**HARRISONBURG** — Rockingham County Board of Supervisors received low bid from Nelson Construction Co., Harrisonburg, \$384,093, for office building and health center.

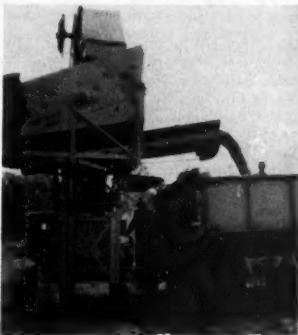
**HARRISONBURG** — Harrisonburg Telephone Co. plans modernization program, \$1,000,000.

**LITTLE CREEK** — Navy Department plans \$1,847,300 development of permanent facilities, Naval Air Bases.

**LYNCHBURG** — Lynchburg College plans new women's dormitory, \$425,000.

(Continued on page 50)

## Bucket Loader and Screen Solve Tough Clay Problem



**Above—Capacity of Clark Construction Company's Barber-Greene loader is illustrated by stream of screened, minus ¾-inch clay. The sloping screens of Simplicity vibrating unit were capable of handling clay with high moisture content. The loader is credited with stepping up production while reducing the equipment needed by twenty-five per cent.**

Using a Barber-Greene model 82-A bucket loader, equipped with a 3 by 6 foot double deck Simplicity vibrating screen, the Ervin Clark Construction Co., of Des Moines, Ia., was able to cut their equipment requirements by more than 25 percent, at the same time speeding up production of sized, screened clay for use in a stabilization job!

The Iowa Road Builders Co., of Fairmont, Minn. (A. G. Otten and H. A. Edman) were prime contractors on a clay-gravel stabilization job in Kossuth County, Iowa. Approximately 142,000 tons of stabilized material was to be laid down in eight different locations.

Preparation of aggregate materials was sub-let to Clark Construction Co. About 30 percent of the material required was to be minus ¾-inch clay. Preparation of this material proved to be a considerable problem at the outset.

A standard hammermill was first placed in operation but failed to live up to expectations. It was replaced with a regular screening plant, originally designed for sand rejection and converted for clay production. Lack of a mechanical feeder and inability to properly control flow to the plant caused trouble. The plant was fed by a bulldozer through a wooden bulkhead. The mechanical equipment and labor for this set-up was:

A 4 x 14 Screening Plant with Ag. screen; A D-8 Dozer to scarify clay base and pull disc; A disc plow; TD-14 dozer to feed material to screening plant; Bulkhead, hopper etc. with necessary planking; four operators (2 on dozers and 2 on screening plant).

Capacity, despite excessive screen wear on plant, averaged between 30 and 100 tons per hour. This was acceptable from a purely production point of view . . . but tied up too much equipment and too

much labor to be profitable.

After about one-half of the job had been completed, Hawkeye Machinery Co., of Des Moines, recommended use of a Barber-Greene model 82-A Bucket loader, equipped with a Simplicity vibrating screen. A unit was secured from the factory at Aurora, Ill., and placed on a trial basis.

One immediate effect of this change was a drastic reduction in equipment and labor requirements. Since the loader picked up its own windrows, screened and delivered to waiting trucks all in one operation, the equipment-labor needs were reduced to a Barber-Greene model 82-A loader with screen; a D-8 dozer with disc to scarify and windrow (used part time); a disc plow; and two operators (dozer operator worked only part time).

After breaking the clay loose from its base with the D-8 and disc, the loader picked up the windrowed material, screened it, discarded the over-size and loaded directly into a truck. Capacity ran from 30 to 120 tons per hour. When dry material was encountered, production exceeded 120 tons per hour.

To prevent excessive wear on the loader's spiral feed, the wearing strips were built up by welding after every two days of operation.

The increased capacity of the Barber-Greene loader exceeded the requirements of the mixing plant. As a result, it was possible to stockpile clay at the plant site, this periodically releasing trucks normally used for the clay haul and putting them to work hauling mixed material from the plant. In this manner, a further saving in equipment and labor was effected.

Quoting Don M. Clark . . . "We were well pleased with the results using the bucket loader . . . the unit more than paid its way over and above our previous operation . . . we know our costs were cut considerably . . ." Mr. Clark gives much credit for the success of the operation to O. R. Ives who operated the loader and was responsible for ironing out the "bugs" inherent with any new development.

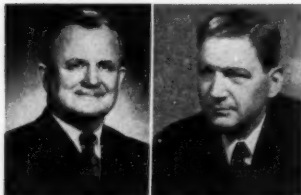
Once prepared, the clay was hauled by truck to a Barber-Greene Model 848 heavy duty mixer, equipped with a truck loading conveyor. One portable conveyor, equipped with a feeder from Barber-Greene's new "Redi-Fab" conveyor line carried the clay from the truck dumping point to the mixer.

A second, Barber-Greene, conveyor, carried crushed gravel from trucks to mixer and was equipped with a job-built hopper containing calcium chloride. This substance was fed into the gravel at a pre-determined rate through a variable orifice at its base. The crushed gravel was produced by a Cedar Rapids crusher.



# Equipment and Material Makers' News

## Roberts Elected Head of Allis-Chalmers



W. A. Roberts      W. C. Johnson

W. A. Roberts has been elected president of Allis-Chalmers Manufacturing Co., Milwaukee, Wis., succeeding the late Walter Geist, according to an announcement by the firm's board of directors.

W. C. Johnson, executive vice-president in charge of the general machinery division, was named executive vice-president for the entire company.

R. S. Stevenson, general sales manager of the tractor division, was named vice-president in charge of the tractor division.

Other new appointments include: J. L. Singleton, vice-president in charge of the general machinery division; A. W. Van Hercke, vice-president in charge of engineering for the tractor division; John Ernst, vice-president in charge of tractor division manufacturing; and Fred Mackey, vice-president in charge of general machinery manufacturing.

Mr. Roberts began his career with Allis-Chalmers in 1924 as a salesman for the company's branch in Wichita, Kansas. He became vice-president in charge of the tractor division in March, 1944, and was elevated to executive vice-president in charge of that division in 1947. In January, 1948, he became a director, and a member of the board's executive committee in March, 1948.

Mr. Johnson started with Allis-Chalmers in 1924 as a machinist's helper. After service in the company's field and sales organizations, he became vice-president of the general machinery division in 1944, executive vice-president in 1947, and a director in 1948.

Mr. Stevenson, who succeeds Roberts as head of the tractor division, has been associated with Allis-Chalmers since 1933. He became general sales manager of the tractor division last year.

## Caterpillar Products Listed

"Caterpillar Products" is the title of a new forty-page booklet recently issued by Caterpillar Tractor Co., Peoria, Ill.

This booklet, published annually, contains a complete listing with pictures and brief specifications of all but two of the current line of "Caterpillar" Products, 81 in all. Eleven new models were announced during the past year, nine of which are included in this issue.

The list of additions ranges from tractors to tool bars and includes the follow-

ing: the DW20 four-wheel and DW21 two-wheel tractors, Nos. 8U and 8SR cable bulldozers, Nos. 20 and 21 scrapers, No. 42 tool bar, No. 27 cable control and the W20 wagon. Not included are two recently announced "Cat" diesel engines, the D326 and D337. Both are 5 1/4 by 6 inch engines. The blower-equipped D337 develops 250 intermittent horsepower and the D326 develops 171 intermittent horsepower. The D337 is used in the new DW20 and DW21 tractors.

The six color cover depicts medallions representing ten of the major fields in which "Caterpillar" products are extensively used. Several application pictures show "Cat" Diesel tractors and motor graders in action.

## Diesels Used in Conversion

One of the newer applications of diesel power is the conversion of locomotive and steam-powered cranes. Marketed with the idea of making a unit with instant availability and eliminating the many inherent maintenance and operating expenses common to steam, repowering in this field is gaining headway.

A recent installation for this type unit has been completed at the Walworth Company's Works in Greensburg, Pa. The Walworth Co. manufactures valves, pipe fittings and pipe wrenches—including the Genuine Stillson Wrench. This installation is in a 15-Ton Link-Belt locomotive crane that is employed to switch and spot cars in the yard as well as to handle raw materials with clamshell bucket or magnet.

The crane has been repowered with a Caterpillar D315 steam crane conversion package consisting of a 73BHP (@ 1800 rpm) diesel engine directly connected to a clutch and Twin Disc 10,000 series torque converter. Immediately behind the torque converter, an integral chain housing is mounted for chain driving the drive shaft formerly powered by a 100 horsepower gasoline engine. The clutch, torque converter and chain housing are packaged in one assembly.

## Special Proving Ground Planned by G.M.

General Motors will build a special proving ground for testing all types of military combat and transport vehicles it manufactures, Charles A. Chayne, vice president in charge of engineering, announced recently.

One thousand acres of land have been purchased adjacent to the G.M. Proving Ground near Milford, Mich., the oldest and largest privately owned automotive testing area in the world.

Building and road construction will start immediately on the project, which is scheduled for completion in July. About half the land is very hilly with natural grades as great as 60 per cent, while the other half is comparatively level.

Roads in the hilly area will duplicate

the toughest terrain that military vehicles encounter in combat or cross-country operation. A natural lake on the property will be used for deep fording and landing operations, as well as for amphibious vehicle tests.

## New Booklet Answers Coal Storage Problems

Allis-Chalmers Manufacturing Co., Tractor Division, Milwaukee, Wis., has issued an 8 page educational booklet No. MS-872-5012 entitled "Economic Coal Storage." The publication is suited as a training aid on safe, orderly coal handling methods. The most flexible type of equipment, with low operating cost, obtained by a small investment, has taught us how to store coal without the hazards of fire and oxidation.

## Koppers Net Income Report

Net income of Koppers Co., Inc., during 1950 was \$11,615,498, after provision for income taxes, the company revealed with publication of its annual report to stockholders.

After provision for payment of preferred dividends, the 1950 net income was equivalent to \$6.81 per share on the 1,617,125 common shares outstanding.

The 1950 income figure compares to earnings of \$7,111,997, or \$4.03 per share on the same number of shares of common stock in 1949, the report showed.

Sales and other receipts during 1950 amounted to \$213,791,687 as compared with sales of \$192,314,685 in 1949.

General Brehon Somervell, chairman and president, told stockholders in a letter which is part of the annual report that heavier demands are being made on the company's engineering and construction division and that the chemical division, formed only four years ago, "has become an important factor in the company's business."

## Local Sources for Scrap Metal Tapped

The search for new deposits of raw materials being conducted by American steel companies has led to a review of local sources of supply not previously considered. One such source is found in grass-covered hills of slag near Coatesville, Pa. These hills contain waste and quantities of scrap skimmed from cooking metal in nearby mills over the last half century.

One of the five slag hills in the vicinity being worked by Brown Brothers Construction Co., Inc., of Coatesville, is estimated to contain 6,000,000 cubic yards. As much as 3,500 tons of scrap iron has been recovered in a single month. In this operation the company virtually picks up the slag hill and sets it down again after recovering the metal.

The hill is first dug into by a Koehring 1 1/2 yard shovel which loads the slag onto busy Koehring "Dumpsters." Their loads are dumped at a higher level a quarter



a mile away. At this point a Lorain crane equipped with a magnet separates the iron from the slag.

The scrap is hauled to the mill and the operation is completed when an Allis Chalmers tractor levels off the residue. All the equipment used in this recovery operation is powered by General Motors diesel engines.

### Kral Named Vice President in Koppers Division

C. A. Kral, Chilean management representative for Koppers Co., Inc., at Concepcion, Chile, since September 1949, has been appointed vice president in Koppers engineering and construction division, it was announced by Gen. Brehon Somervell, Koppers president.

Koppers supervised construction of a new integrated steel mill near Concepcion for the Pacific Steel Co. of Chile and is continuing to give supervisory assistance in the operation of the plant for a period of years. Mr. Kral will now become Koppers representative on the board of directors of Pacific Steel Co., replacing W. C. Snyder, Jr., vice president in charge of the metallurgical department of Koppers engineering and construction division, whose duties keep him in this country a majority of the time.

Mr. Kral, who has been in this country for several weeks, will return to Chile soon to resume his duties.

Since joining Koppers in 1949, he has resided in Chile, and he was responsible for putting into operation the integrated steel plant of Pacific Steel Co. which has been producing steel since early in 1950.

### G. M. Catalog Describes Series 71 Two-Cycle Diesels

Detroit diesel engine division of General Motors announces a new catalog describing the division's complete line of Series 71 2-cycle diesel engines for application in the industrial, petroleum and marine fields. The book covers single and multiple engine units from 2 to 24 cylinders with power ranging from 32 continuous to 780 intermittent horsepower.

It contains data on G.M. diesel 2-cycle design and interchangeability of parts; a "Select Your Power" chart covering 57 standard power take-off and 7 torque converter models; engine illustrations and an outline of Detroit diesel service facilities.

### LeTourneau Appoints Two Field Engineers

R. G. LeTourneau, Inc., Peoria, Ill., construction equipment manufacturer, announces appointment of James W. O'Connor and J. W. (Bill) Gulledge to the company's field engineering staff.

Before coming to LeTourneau, Mr. O'Connor served with the Seabees from 1943 to 1946, spending two years in the South Pacific working with heavy construction equipment. Formerly with Massachusetts State Highway Department and with a sand and gravel company in Massachusetts, he received his B. S. in

civil engineering from the Missouri School of Mines and Metallurgy at Rolla.

Mr. Gulledge, before coming to LeTourneau, served in the Navy as a mine technician. He studied engineering at Bradley University, University of Illinois and Illinois Institute of Technology. Later he was with the California State Highway Division, and was project engineer for a U. S. Electrical Motors job in Los Angeles, Calif. He spent 18 months in the Pacific working in a civilian capacity in the design branch of the Okinawa Engineering District working both on Okinawa and Japan.

### Sanitary Landfill Discussed in Caterpillar Booklet

One of the most informative descriptions of the sanitary landfill method of refuse and garbage disposal is presented in Caterpillar Tractor Co.'s new 16-page booklet, "A Look To The Future With Sanitary Landfill."

The frank description of community health problems and various methods of refuse and garbage disposal are treated pictorially and by the use of comic-type cartoons. A progressive history of a typical community, showing how it finally determines the proper method and equipment in solving proper garbage and refuse disposal is discussed in detail.

The booklet, Form 3025, designed to serve as a guide to proper site selections, the choice of the right equipment to do the job, and the actual operation of the sanitary fill, points out to the reader the pertinent facts about the sanitary landfill method. It illustrates what other communities and cities have done and are doing to solve their own individual problems.

It suggests how to determine the proper time and way to start such a program, what requirements must be met to conduct a satisfactory landfill area, what to look for in selecting the site, the best method applicable to average needs, and the benefits and controls received by the community in the future.

### Two Catalogs Released by Hyster Company

Two-color catalogs featuring design and application of the Hystaway Excavator-Crane and the versatile Grid Roller for bituminous road salvage have just been issued by the Hyster Co. of Portland, Oregon, materials handling equipment manufacturer.

The 16-page Hystaway catalog is profusely illustrated with operational photographs of the five-in-one machine, described as both a utility and production tool for mounting on "Caterpillar" track-type tractors. Components are the shovel, dragline, crane, backhoe and clamshell, each of which is pictorially presented and described fully and separately.

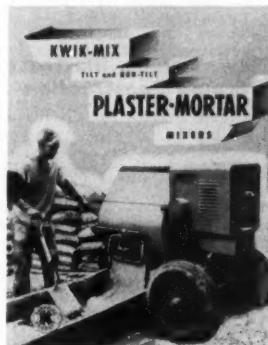
Mounting procedure, complete specifications and dimensional data are presented. Listed also are optional equipment and attachments available, including ESCO track-walking shoes to permit tractor with Hystaway to operate on or off railroad tracks.

### New Catalog on Plaster-Mortar Mixers Issued by Kwik-Mix Company

A simple method of comparing construction features, dimensions and capacities of various types and sizes of plaster-mortar mixers is provided in a new catalog recently released by the Kwik-Mix Co. Located in Port Washington, Wis., and a subsidiary of the Koehring Co., Milwaukee, Wis. Kwik-Mix currently manufactures three types of plaster-mortar mixers in 6 cubic foot and 10 cubic foot sizes.

Printed in attractive colors, the new bulletin contains many photographs depicting exclusive Kwik-Mix features along with schematic drawings listing the detailed dimensions of each machine.

The new 8-page catalog contains a complete description of the recently introduced Kwik-Mix tilting plaster-mortar mixer. This 6 cubic foot end discharge model features a unique labor-saving power tilt arrangement. The loaded drum is tilted for discharge by power from the



paddle shaft drive action when the ratchet lever is released. For fast cleaning, the drum also can be tilted in the opposite direction.

Easy handling features of the Kwik-Mix standard non-tilting 6 cubic foot side discharge mixer are explained with individual photograph in the new catalog.

The big 10 cubic foot non-tilting model manufactured by Kwik-Mix also is described in detail. Designed for high volume production the 10-P can be furnished either with skid or pneumatic tire mounting.

### Link-Belt "RC" Couplings Covered by New Catalog

A new, 4-page, illustrated Folder No. 2363 on Link-Belt "RC" roller chain flexible shaft couplings has been published by Link-Belt Co., Chicago, Ill.

Engineering information for proper application includes dimensions, weights, service factors and horsepower ratings.

Detailed data are also given on two types of protective grease-retaining casings: Style R (spun metal revolving type) and Style P (plastic, revolving type).

(More on page 38)

# Equipment and Material Makers' News

## Improved Hydro-Trencher With "Forced Ejection" Bucket

The Oliver Corp., has announced improvements in the 1951 model of the Oliver-Ware Hydro-Trencher. Increased reach of 16 feet makes it possible to dig to a depth of 8 to 10 feet and load to a height of 5 feet 6 inches with standard trencher bucket. Single 5 inch boom hydraulic cylinder, double 4 inch dipper stick hydraulic cylinders, plus an improved dipper stick, now make it possible to "push" on the large diameter of the dipper stick cylinders both in trenching and swing loading. The new ram permits a faster swing, thus speeds loading. An independent, double-acting ram opens and closes bucket discharge gate. The hydraulic accumulator is now standard equipment. This device reduces vibration to a minimum, saves strain on equipment and operator and makes for smoother, faster operation.

## New Charts Illustrate Frame Construction

Two new charts which illustrate graphically the principles of proper frame construction are now available from the Southern Pine Association, New Orleans, La.

The charts measure 3 by 4 feet, and when placed side by side require a wall space of 4 by six feet for display purposes.

"This new material has been shown to dealers at their annual conventions which have already been held," said H. C. Berckes, "and it is evident that they are proven to be very popular. Orders for several hundred sets have already been placed and dealers who use them will find them very useful in educating the public to the importance of better construction."

"In addition to use at dealer conventions, the new charts are suitable for architectural and drafting classes in schools; building and loan exhibits and home building expositions; and for use in dealer offices or window displays. Copies are available to dealers upon request from the Association headquarters in New Orleans," Mr. Berckes said.

## Caterpillar Releases Operators Handbook

A four-color operator's handbook printed in comic book style is now being distributed by Caterpillar Tractor Co., Peoria, Ill.

The 32-page book contains information on the operation of bulldozers, scrapers, rippers and cable controls, plus additional material on high speed hauling, loading, and grade stakes familiarization. Designed to make operation of "Caterpillar" earthmoving equipment easy to understand, the book shows many of the techniques in earthmoving operation as

compiled by operators and engineers in the field.

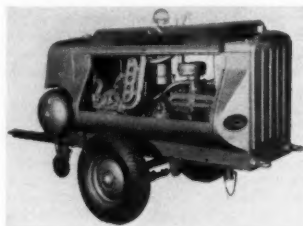
It explains when to use bulldozers, how to pioneer side hill cuts, push loading, rock and tree removal, soft fill work, do's and don'ts of proper tractor-dozzer adjustment and operation, and other earthmoving applications.

Techniques are simplified through the use of familiar scenes in the cartoon illustrations which show the operator how to get the best performance and job application possible. It tells the story through a typical job foreman who talks about the various techniques needed for efficient tractor-dozzer operation. It has compiled a wealth of explanatory material which often becomes buried in the usual heavily printed and complex manuals.

## Hercules Engine Powers New Gardner-Denver Compressor

The new Gardner-Denver Model WH-105 two stage, portable air compressor, recently introduced to the trade by Gardner-Denver Co., Quincy, Ill., is powered by the Hercules QXD-5 gasoline engine.

The Hercules Model QXD-5, built by



Model WH-105 Compressor powered by a Hercules Motor.

Hercules Motors Corp., Canton, Ohio, is a 6 cylinder engine with a 3-7/16-inch bore and 4 1/4-inch stroke.

The Model WH-105 Gardner-Denver portable compressor provides a water cooled 105 CFM unit which assures cooler air to the tools and thus keeps tool upkeep to a minimum. Being a two-stage air compressor, the contractor is assured adequate rated capacity at any altitude.

## United States Steel Makes Hearth Award to Koppers

U. S. Steel Co. has awarded Koppers Company, Inc. a contract for the engineering and construction of the open hearth furnaces of the new Fairless Works at Morrisville, Pa., it was announced by Joseph Becker, vice president and general manager of Koppers engineering and construction division, Pittsburgh, Pa.

Koppers' Freyn department, with offices in Chicago, Ill., will engineer and construct the nine 275-net-ton open hearth furnaces to be built at this works.

## Allis-Chalmers Names Tractor Engineering Vice President

Arthur W. Van Hercke, director of engineering for the Tractor division of Allis-Chalmers, Milwaukee, Wis., has been named vice president in charge of tractor division engineering.

Through his father's farm equipment dealership at Pleasanton, Kan., Mr. Van Hercke became familiar with the potentialities of mechanized farming.

Mr. Van Hercke continued his association with the family's Pleasanton dealership until 1932 when he joined Allis-Chalmers as an industrial salesman out of the Kansas City branch. In 1941, Mr. Van Hercke became general sales manager and in 1943 he was appointed assistant manager of the Tractor division in charge of engineering. As director of tractor engineering Mr. Van Hercke was drawing on his valuable knowledge to effect notable recognition for the Allis-Chalmers organization.

## Worthington Names Fraser Midwest Sales Manager

A. William Fraser, formerly general European manager, has been appointed midwest sales manager of Worthington Pump and Machinery Corp., Harrison, N. J., according to an announcement by W. H. Feldman, vice-president in charge of sales for Worthington. Mr. Fraser will direct the sales of Chicago, St. Paul, Kansas City and St. Louis offices, making his headquarters in Chicago.

After graduating from Northeastern University with a degree of Bachelor of Mechanical Engineering, Mr. Fraser joined Worthington training course in 1929 and became sales engineer in various Worthington offices and plants throughout the country. In 1937 he became Chicago district manager and in 1945 general European manager. He is a member of the American Club of Paris, the TNT Club of Paris and the St. Germain Country Club.

## Allis-Chalmers Subsidiary Acquires Canadian Plant

The purchase of all the physical assets of Canadian Allis-Chalmers, Limited, by a new wholly owned subsidiary of Allis-Chalmers Manufacturing Co. of Milwaukee, Wis., was announced recently by the parent concern.

The new subsidiary is known as Canadian Allis-Chalmers (1951) Ltd.

The Canadian firm, which employs approximately 525 people, will continue the production of heavy machinery for the Canadian market. M. C. Lowe, formerly vice president of Canadian Allis-Chalmers, Ltd., has been named president of the new Allis-Chalmers subsidiary.

The plant, located at Lachine, Quebec, a suburb of Montreal, has been produc-

ing hydraulic turbines, centrifugal pumps, Texrope drives, mining machinery, and equipment for the paper industry under a license from the Allis-Chalmers Manufacturing Company since 1913.

Included in the purchase was 17 acres of land on which there are five buildings. These comprise welding, machine and pattern shops as well as a pattern storage building and an office building.

This is the second purchase of a Canadian plant by the firm in the past six months. In September, 1950, Allis-Chalmers, Rumely, Ltd., another Canadian subsidiary of the company, purchased a plant at St. Thomas, Ontario, where controls for diesel locomotives are now being produced.

### Austin-Western Loses Assistant Ad Manager

Austin-Western Co., Aurora, Ill., manufacturers of construction equipment, announce the death of R. G. Milton, assistant advertising manager.

"Bob", as he was known, underwent a very serious operation early last fall, and while apparently on the road to recovery, complications set in which ultimately resulted in his death.

### Tool Company Buys Old British Firm

The purchase of Armstrong-Whitworth and Co., Pneumatic Tools, Ltd., Gateshead-on-Tyne, England, for nearly a century one of the largest and most prominent of British industries by Independent Pneumatic Tool Co., Aurora, Ill., manufacturers of Thor portable power tools, is announced by Neil C. Hurley, Jr., Thor president.

The Armstrong-Whitworth pneumatic tool company and its big Close works section in Gateshead with a force of 750 employees now become an affiliate of Independent Pneumatic Tool Co., Ltd., London, England, a subsidiary of the parent company operating in Aurora, Ill., and Los Angeles, Calif., plants and 20 branches in the United States and Canada, Thor Tool Hemisphere, Inc., Sao Paulo, Brazil, and Thor Tool Continental, Inc., Antwerp, Belgium.

Also in Gateshead to lay out plans for an early expansion of the pneumatic tool works are E. R. Wyler, Thor vice-president and director of exports, and James A. Perham, chief engineer at Thor's Aurora works. Mr. Perham is also planning with Armstrong engineers certain Thor pneumatic tools to be put into production in England.

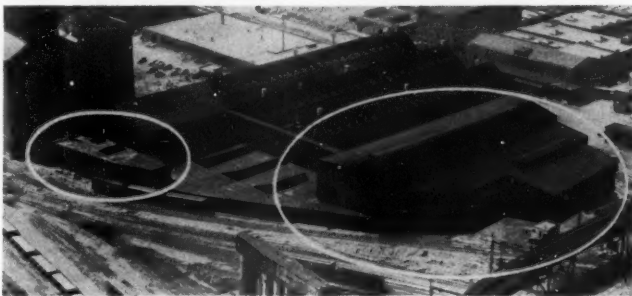
Mr. Hurley disclosed that he is inspecting a new site on which to erect a new and larger plant to handle the anticipated increase in production of the combined Armstrong-Whitworth and Thor pneumatic tool lines.

The Armstrong-Whitworth name, a leading and prominent one in pneumatic tools all over the world since 1905, will be retained under the new ownership, Mr. Hurley stated further.

### Thew Shifts Personnel

J. T. Cushing, sales manager of the Thew Shovel Co., Lorain, Ohio, an-

## Ryerson Rebuilding, Enlarging St. Louis Plant



Above—St. Louis plant of Joseph T. Ryerson & Son, Inc., steel distributors, as it will look when the current expansion program is completed late this year. Circled at the right is the artist's drawing of the addition which will provide about 50,000 additional square feet of warehouse space.

Joseph T. Ryerson & Son, Inc., steel distributor, has announced an expansion program at its St. Louis plant. Included is reconstruction, new layout of existing facilities, and erection of additional warehouse space totaling approximately 50,000 square feet.

Construction has begun. The entire project is scheduled to be completed before the end of the year. Total warehouse and office space of the enlarged plant will be about 161,000 square feet. The addition will be built on property lying immediately north of the present plant. Three additional spans will be constructed, all heated and completely crane served. This new building will be of steel frame construction with reinforced concrete and a special type steel siding, well lighted with side windows, skylights, and modern incandescent mercury illumination. The space will be used for shearing and stocking sheets, and for warehousing alloy and stainless steels including special aircraft alloys and stainless steel for the defense program.

The new layout of the present plant provides for a completely new power system, new arrangement of spans, and a new center driveway for trucks which will greatly speed up loading. The present warehouse will be equipped with new overhead high speed bridge cranes.

The enlarged plant will have the fol-

lowing new equipment: A new 200-horsepower high-speed friction saw, the most powerful in any warehouse between Chicago and the West Coast, with new unloading roll table to facilitate handling of cut material; a new fast cutting plate shear equipped with special handling devices; and a new electric eye plate burning machine. The latter machine, which will be the only one in the area, permits more complicated and intricate plate cutting for defense work as well as to take care of requirements of our civilian economy. Other new equipment to be installed includes new hacksaws, scales, racks and other fixtures. All of the building improvements and new equipment are designed to afford maximum speed in cutting and shipping steel to the company's customers, many of whom are smaller shops and manufacturers that are now doing work under the defense program.

The present two-story office building which forms an integral part of the plant and which utilizes the second floor only for offices, will undergo some changes to provide the additional office space required.

The Ryerson St. Louis plant is located at 5 Clinton Street, where the company has been in business in this area since 1914, when the Hagar Iron and Steel Co. was purchased.

### New Winch for Oil Well Service

A new oil well servicing winch for mounting on "Caterpillar" D4 (60-inch gauge) tractors equipped with either fender or seat-mounted fuel tank, has been developed by the Hyster Co. of Portland, Ore.

Field tested in the Bradford, Pa., oil territory, the new winch is designed for the many specialized jobs around shallow oil fields. Typical uses include pulling rods and casing, baline, cleaning out and priming wells, and many other jobs requiring a special type of winch.

The new winch has extra-large drum capacity of handling cable ranging from 3,480 feet of  $\frac{3}{8}$ -inch to 870 feet of  $\frac{1}{2}$ -inch.

## \$5,000,000 Lever Plant Started at St. Louis



**Above—New plant to be built on 27-acre property at Pagedale, St. Louis County, by Lever Brothers Co. Detergents, shortening and margarine will be manufactured. The first unit will cost \$5,000,000.**

Lever Brothers Co. will undertake a long-range, major construction program which will establish one of the country's largest and most complete manufacturing centers for a wide variety of detergents, vegetable shortening, and margarine at Pagedale, Mo.

The first unit will be a \$5,000,000 synthetic detergent plant and warehouse which will cover three acres of a 27-acre plant site at Pagedale. Excavation is already under way.

W. H. Burkhart, production vice president of Lever Brothers Co., whose present St. Louis plant is the historical home of one of the city's oldest industries, made the announcement. George C. Smith, president of the St. Louis Chamber of Commerce, welcomed the plans as "vitaly significant to the growth of our community and the prosperity of our people."

The synthetic detergent plant and warehouse will form a nucleus around which additional units will be built over a period of years, each fitting into an over-all pattern designed to provide maximum efficiency in operation. The Pagedale property, according to Lever officials, is admirably suited to this gradual expansion program.

The first unit will be devoted to the exclusive manufacture of No-Rinse Surf, Lever's "soapless" detergent. At the same time, work will start on the erection of the warehouse, designed as a central distribution point. Full construction crews will be used to complete both projects by the spring of 1952.

While work on the plant and warehouse goes on, plans will be made for addition of the other buildings and facilities as required. As yet, no dates have been set for the start of these units, and no estimate made of the total cost.

The 27-acre rectangular-shaped property in Pagedale was acquired by Lever in 1947. The site is bounded by Pennsylvania and Ferguson Avenues and the St. Louis Belt and Terminal Railroad, assuring excellent shipping facilities. The main buildings will face west on Pennsylvania Avenue, a block from Page Avenue thoroughfare and close to University city.

The No-Rinse Surf plant will include three major buildings, a six-story process-

ing unit, a three-story structure for packaging the product and an electric substation. With 125,000 square feet of floor space, the warehouse will be connected with the plant to speed up storage and shipping operations. It is estimated that the Surf plant and the warehouse will employ approximately 200 people.

The complete construction plans call for the ultimate use of the entire tract of land. Approximately 600 people will be employed.

Facilities included with the first unit will be a modern cafeteria in which low-cost quality food will be served, a fully equipped and staffed medical clinic, and light, airy locker rooms. Parking space will be provided for more than 300 automobiles.

All buildings will incorporate the latest designs in functional architecture, and the equipment and engineering will make the plant among the finest of its kind anywhere. Plans call for attractive landscaping of the property.

Construction and engineering is under contract to the Bechtel Corp., with supervision by Mr. Burkhart, and the Lever engineering staff. Bechtel is now completing the eighth of Lever's network of plants located in key industrial centers across the country.

The present Lever plant in St. Louis at Third and Convent Streets will continue in operation until the new Surf unit is completed. Its present St. Louis plant was acquired by Lever Brothers in 1939 from the Hecker Products Co., along with a plant in Baltimore. The plant was occupied in 1883 by the N. K. Fairbank Co., founded in 1867, which was famous as a pioneer producer of powdered soaps, including Gold Dust, made in 1886.

Lever still makes Gold Dust at this plant as well as Gold Dust scouring cleanser and Silver Dust, a Lever-improved granulated soap with widespread and growing popularity. During World War II the plant made thousands of tons of G.I.-type soap and large quantities of glycerine used in the manufacture of explosives for the armed forces.

The other Lever plants making soap, soap powders, shortening and margarine,

dentifrices and cosmetics are located in Hammond, Ind.; Cambridge, Mass.; Edgewater, N. J.; Baltimore, Md.; Chicago, Ill., and Long Island City, N. Y. A new plant in Los Angeles, California, is nearing completion.

## Four-Year Oklahoma Road Program Set at \$134,000,000

Oklahoma built 12,382 miles of road and bridge improvements during the four-year period ending with the close of 1950 and at that time had 1,588 more miles under construction.

Improvements completed cost \$96,739,889 and those in construction cost \$37,351,705.

These figures were released in the state highway commission's year-end report by Chairman C. H. Mullendore.

Combined they represent a program of 13,950 miles at a cost of \$134,091,594.

Chairman Mullendore says this is the biggest amount of road and bridge work the state has ever accomplished in four years.

The report covers both regular and farm-to-market projects.

It shows completed regular projects totaled 9,823 miles costing \$75,129,203.

Completed farm-to-market projects amounted to 2,539 miles built at a cost of \$21,610,686.

Regular projects under construction at the end of the year amounted to 1,122 miles contracted for \$27,825,854.

Farm-to-market roads being built at the same time amounted to 466 miles with \$9,525,751 as the cost.

## Du Pont Explosives Plant Planned at Martinsburg

Plans for a major expansion of its Repauno plant at Gibbstown, N. J., and the construction of a new commercial explosives plant near Martinsburg, W. Va., have been announced by E. I. du Pont de Nemours and Co.

Expansion of chemical manufacturing facilities at Repauno will be for increased production of nitric acid and dimethyl terephthalate (DMT). The principal manufacturing at the Repauno plant now is the production of commercial explosives.

DMT is a white flaky powder produced from nitric acid and xylene and methanol. It is a principle raw material for the manufacture of Du Pont's new synthetic textile fiber known tentatively as Fiber V.

The expanded facilities at Repauno will supply DMT for the company's new Fiber V plant at Kinston, N. C., plans for construction of which were recently announced.

Technically, Fiber V is a condensation polymer obtained from ethylene glycol and DMT. Like nylon and "Orlon" acrylic fiber, neither of which is chemically related to Fiber V, this new fiber appears to have many properties which represent potentially outstanding contributions to the textile industry. The new Martinsburg plant will be built on a site of approximately 1,500 acres located



on the Potomac River about eight miles from Martinsburg.

Construction of the Repauno project is expected to start in May and the Martinsburg plant at a later date. If everything progresses as planned, the Repauno plant will be in operation by the end of 1952.

Construction will be under the direction of Du Pont's engineering department.

## Kentucky Road Head Feted by Associates

A formal testimonial of regard was extended February 14 to retiring Highway Commissioner John A. Keck by employees and associates in the central office at Frankfort, Ky. Gift certificates for additional pieces of the Rhodora china pattern and service for four in Old Mirror silver pattern were presented by State Highway Engineer Dwight H. Bray representing the employees.

The china and silver patterns are those selected by the Kecks early in their married life.

"Kentucky's advance in roadbuilding during your administration has been outstanding," Mr. Bray said. "A total of 7126 miles of roads has been completed or placed under contract. This means that over half the highways in Kentucky have had attention—and that is something no other commissioner has been able to accomplish in the same length of time. We all wish you well and will long remember your good work as administrator of this department."

## Hulah Dam Accepted by Tulsa Engineer Office

The Tulsa District of the Corps of Engineers last month made final inspection on the Hulah Dam on the Caney River near Bartlesville, Okla., and accepted it as essentially completed from the Mitty Brothers Construction Co. of Los Angeles, Calif.

This project, authorized by the Flood Control Act of 1936, is a unit of the comprehensive reservoir system for the Arkansas River Basin, and while affording a high degree of protection in the Caney River Valley to about 57,000 acres of land, will also materially aid in protecting the Verdigris and Arkansas River Basins.

The Hulah Dam's construction cost amounted to approximately \$6,500,000, but land acquisition, relocations, and other developments will bring the total to approximately \$11,000,000, said Col. Edward G. Herb, district engineer of the Tulsa District, Corps of Engineers.

Initial excavation work on this project was started in 1946 by the Plains Construction Co., Oklahoma City. Major items of work involved the excavation of 1,072,453 cubic yards of dirt, and 985,529 cubic yards of rolled earth fill. The dam is a rolled-earth fill type structure 4,728 feet in length, exclusive of the spillway, and height is 97 feet above the stream bed. Ten 40-foot-wide gates control discharges through the spillway.

The reservoir will have a maximum length of approximately 20 miles, and a maximum width of two miles. Inundation will cover about 13,000 acres. Total storage capacity is 295,000 acre-feet.

## T. V. A. Proceeds on Two More Steam Plants

Two additional steam plants are to be constructed by the Tennessee Valley Authority. One will be known as the Shawnee project and will be located in west Kentucky about ten air miles northwest of Paducah. The other is to be located about two miles from Kingston, in east Tennessee, the town from which it takes its name.

The two plants will be almost identical. Each will have four generating units, with a capacity of 150,000 kilowatts for the separate units, or a total of 1,200,000 kilowatts in the two plants. Estimated cost of the Shawnee project is \$88,500,000; of the Kingston project, \$85,000,000.

First generating unit at the Shawnee plant, which is named after an Indian tribe that formerly inhabited the region, is scheduled to go on the line early in December of 1952. Work is now proceeding on a fast schedule under Frederick L. Weiss, formerly project manager at the Johnsonville plant, and now assigned to the Shawnee operation.

At the present time the site is being graded. Work is moving forward on the access highway and railroad. Most of the construction will be by contract. Westinghouse has been awarded the contract to build the generators. Babcock & Wilcox will supply the boilers.

The Kingston plant is to start producing power about five months after Shawnee's initial operation. This means about May of 1953. Drilling is now under way at the site. It is expected that Tennessee Valley Authority will do most of the work by force account. Major contracts for equipment have not yet been let.

## Metal Lath Makers Elect 1951 Leaders

At its annual meeting, recently held in San Antonio, Texas, the Metal Lath Manufacturers' Association elected the following officers for the year 1951: President, H. B. Brown, assistant general sales manager of Inland Steel Products Co., Milwaukee, Wisc.; Vice President, F. D. Horton, president of Alabama Metal Lath Company, Inc., Birmingham, Ala.

Also chosen were members of the

Executive Committee: G. J. Casey, sales manager of the Metal Lath Division, Truscon Steel Co., Youngstown, Ohio; J. G. Stemples, sales manager of steel products, United States Gypsum Co., Chicago, Ill.; E. B. Carter, vice-president in charge of sales at Wheeling Corrugating Co., Wheeling, W. Va. Chairman of the executive committee is H. B. Brown, serving ex-officio as president of the Association.

Donald R. Wadle was re-elected as commissioner and secretary-treasurer of the Metal Lath Manufacturers' Association, whose headquarters are 636 Engle-

(Continued on page 50)

## Architects Honor Craftsmen in Charleston Ceremony

Three craftsmen of the building trades were recently recognized by the West Virginia chapter of the American Institute of Architects, which presented awards for exceptional ability and excellence to Albert W. Ertzman, Huntington electrician; Pete M. Mayers, stone mason and Milton E. Norris, master painter, both of Charleston.

The honors were made at the annual dinner held by the West Virginia Chapter with President L. D. Schmidt, Fairmont architect, making the presentations, and Vice President Charles A. Haviland, Charleston architect, assisting. Officials and members of the Associated General Contractors of West Virginia also participated in the affair.

In handing the awards to the three craftsmen, Mr. Schmidt said the "West Virginia Chapter is always interested in promoting better craftsmanship. It recognizes that one of the ways that this can be done is by giving proper recognition to outstanding craftsmen. It is anxious to honor those men who place the excellence of work above monetary return."

"The American Institute of Architects is proud to honor you as outstanding personalities in your crafts," he told the three building tradesmen, and "it is my pleasure and a great privilege to present the first merit award ever to be presented in the State of West Virginia by architects for excellence in craftsmanship."



Above—Building trades craftsmen were formally recognized recently by the West Virginia Chapter of the American Institute of Architects, who presented awards for ability and excellence in their respective fields. Left to right are: Vice President Charles A. Haviland, Charleston architect; Milton Earl Norris, master painter, Charleston; Pete M. Mayers, Charleston stone mason; and Albert William Ertzman, Huntington electrician. L. D. Schmidt, Fairmont architect, is president of the chapter and is shown making the presentation.

## Frisco to Construct Fort Worth Terminal



**Above—Architect's sketch of proposed Frisco freight station and office building at Fort Worth. The office section will be two stories, the freight dock and warehouse, one story. It will be fire resistant and modernly equipped.**

Plans for construction of a new office building and freight station by the St. Louis-San Francisco and Texas Railway Co. have been announced. C. J. Stephenson, vice president and general manager, said the new building will be located on Vickery Boulevard at Hemphill Street, just adjacent to the present Frisco freight station. The office portion will be two stories high, while the warehouse and freight station and loading docks, one story.

Overall length of the new structure will be 276 feet. Width of the office portion will be 42 feet, and that of the balance will be 56 feet. The docks will be 151 feet long.

Mr. Stephenson said the office portion of the new building will be of buff brick and the freight portion will be of red brick. Trim will be of native Texas stone. Construction will be such as to permit addition of a third floor at a later date, should there be need for one, he added.

Construction is expected to get under way just as soon as materials are obtainable, Mr. Stephenson said. The building will house Frisco offices now in the Meachams Building as well as those in the present freight station.

The Frisco executive said that functional colors will be used throughout the offices and that movable partitions will be utilized in the office portion. The building will be fire-resistant. Acoustical ceilings will be used throughout, and floors of offices will be of parquet wood flooring, while asphalt tile will be used in the

hallways. Lighting will be fluorescent.

Specially-designed visors will adorn the exterior of the building, Mr. Stephenson said. These visors will be situated so that they will control the sunlight entering the building throughout the year. In the period from March 22 through September 22, no direct sunlight will enter the office windows, thus making the building cooler during the warmest period of the year. In the winter, the visors will permit some sunlight for natural warmth.

Heating of the building will be by forced air, and the heating system will be adaptable to air-conditioning as the need arises.

In the past two years the Frisco has made use of functional colors in all of its office construction and modernization program, Mr. Stephenson said, adding that such colors have been found to be more pleasant for the employee as well as reducing eye-strain. The particular color of any office, he declared, will be governed by the location as well as the type of work to be done in that office. Availability of natural light will also be taken into account in selecting colors.

Furnishings throughout the building will be new and will harmonize with the color scheme and general architecture. Offices to be located in the new structure will be the executive and traffic offices presently located in the Meachams Building, the freight offices, the division engineer, special agent and claim agents.

The building was designed by O. H. Tucker, Frisco architect, and his staff.

## \$80,000,000 Reynolds Plant Located at Corpus Christi

Richard S. Reynolds, Jr., president of Reynolds Metals Co. of Richmond, Va., has announced his company will build an \$80,000,000 aluminum reduction plant in the Corpus Christi area. Capacity of the project will be 150,000,000 pounds of aluminum pig annually. It will be located in San Patricio County near Gregory.

Work on construction of the plant will be started in a few weeks, and it is expected that it will be in operation by the end of the year. About six hundred people will be employed.

J. Gordon Turnbull, Inc., of Cleveland, has been engaged to engineer and supervise erection of the facilities, it was revealed by M. W. Henry, vice president in charge of purchasing. All possible local services will be utilized.

An electric power plant will be constructed in conjunction with the alumi-

num operation which will have the capacity to generate 175,000 kilowatts of power, all of which will be required in operation of the aluminum plant. Power will be generated by diesel engines which will be energized by natural gas. It requires 10 kilowatts of power to make one pound of aluminum. Contracts for the diesel engines have already been placed.

The aluminum reduction facility will be housed in four pot line buildings each 1,600 feet long. In addition there will be several buildings including a carbon plant which will produce the carbon required for the operation. The Soderberg process is to be used.

Aluminum is made from alumina which is made from bauxite. The alumina which will be used at Corpus Christi in the initial stages of the operation will be shipped here from Reynolds Metals Company's alumina plant located at Hurricane Creek, Ark. Plans contemplate eventually building an alumina plant with a capacity of 1,000 tons daily adjacent to

the Corpus Christi Reduction Plant.

The site which has been acquired contains 2,000 acres which provides for future expansion. It is planned to supply this plant with bauxite from Jamaica, where Reynolds has extensive bauxite reserves. Mining operations are being installed there by Reynolds Jamaica Mines, Ltd., a subsidiary.

One reason for selection of the site is the shipping facilities from Jamaica from where bauxite will eventually be moved to the contemplated alumina plant.

Four hundred tons, or about eight carloads, of alumina will be the daily requirement for the Corpus Christi reduction plant. Other raw materials essential include 80 tons of petroleum coke, five tons of cryolite, and 20 tons of pitch per day. The plant will be the most modern yet constructed. Included will be all features which will create healthful working conditions.

Reynolds Metals Co. is the second largest producer of aluminum in the United States. Its production of virgin aluminum pig last year totaled approximately 500,000,000 pounds. Total sales of the company in 1950 were in excess of \$175,000,000.

Reynolds has aluminum reduction plants at Sheffield, Ala.; Jones Mills, Ark.; Longview, Wash., and Troutdale, Ore. The company is the largest producer of aluminum foil. It has extensive aluminum sheet, extrusions and building products plants. There are 24 plants in 12 different states. The company was founded by R. S. Reynolds, Sr., in 1925. He is now chairman of the board. President is Richard S. Reynolds, Jr. The Corpus Christi plant will be under the general supervision of J. Louis Reynolds, vice president in charge of operations.

The Corpus Christi aluminum operation is a part of the program of aluminum expansion which has been initiated by the Federal Government to increase the quantity of a vital metal for national defense.

The project is privately financed, according to C. A. Wishart, assistant treasurer. Reynolds representatives have examined a number of areas in the southwest in the last two months and arrived at the conclusion that Corpus Christi is the most advantageous location.

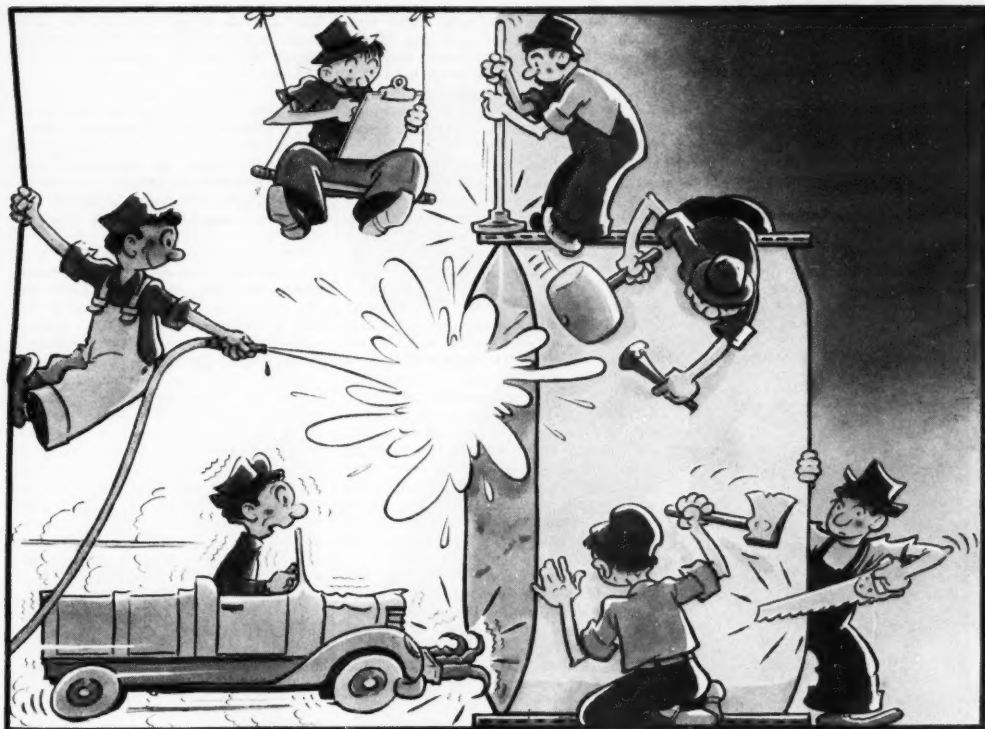
## Texas Vehicle Record Put Above 3,000,000

Motor vehicle registrations in Texas passed the 3,000,000 mark in the past year, it was recently revealed by the Texas Highway Department.

Total registrations for the past year are now expected to reach 3,180,000 before the registration year ends March 31.

D. C. Greer, state highway engineer, said that this year's increase was almost double that of any previous annual period. "Since 1945, registrations have been increasing about 300,000 per year," he said, "but this time the increase has jumped over 500,000."

Based on preliminary figures, it appears that Texas has risen from fifth to third in the nation in total number of vehicles registered.



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## Captain Hiltabidle Made Rear Admiral

Promotion of Capt. W. Orme Hiltabidle, Jr., CEC, United States Navy, to Rear Admiral was announced recently by the White House. Captain Hiltabidle has had a notable career in the Navy. Formerly chief inspector of the Bureau of Yards and Docks, he held the spot rank of commodore during the latter part of World War II. At present he is district public works officer for the Fifth Naval District, with headquarters at Norfolk.

Admiral Hiltabidle was public works officer at the Pearl Harbor naval shipyard from 1941 to 1943, and supervised the repairing of the yard after the Japanese attack.

Between April 1944 and July 1945, as officer-in-charge of the fifth naval construction



Rr. Adm. W. O. Hiltabidle

brigade and island engineer for Guam, he supervised the planning and execution of a \$300,000,000 base development program for the island. During this tour of duty, on April 6, 1945, he was promoted to commodore.

A native of Glyndon, Md., Admiral Hiltabidle graduated from Lafayette College, Easton, Penn., in 1919. In 1921 he entered the Civil Engineer Corps after a national competitive examination, as a lieutenant, junior grade.

Since then he has served at naval installations in New York, Newport, R. I., Hawthorne, Nev., and San Diego, Calif., among others. In 1933 he graduated from the Army Industrial College.

Admiral Hiltabidle is a member of the American Society of Civil Engineers and of the executive committee of its waterways division. In addition, he is president of the Washington, D. C., chapter of the Lafayette Alumni Association, and is a member of the Society of American Military Engineers, the National Press Club, the Newcomen Society, and the Army-Navy Country Club.

## Louisiana Highway Bids

The Louisiana Department of Highways, Baton Rouge received low bids on February 21 for projects in the following counties:

Rapides—State Project No. 73-03-10,

0.051 miles of grading and bridge consisting of six 30-foot and one 75-foot I-beam spans, Bayou Boeuf diversion channel near LeCompte, State Route No. 24; A. P. Johnston, Baton Rouge, \$75,564; Forcum-James Co., Baton Rouge, \$80,112; Austin Bridge Co., Dallas, Texas, \$80,401;

Cameron—State Project No. 737-00-47, scraping or sandblasting to bare metal and painting one steel tug boat and one steel ferry barge; Pelican Shipyard and Machine Shop, Plaquemine, \$2,013; Intercoastal Shipyard, Inc., Morgan City, \$2,470; Kansas City Bridge Co., Plaquemine, \$3,274;

Bossier—State Project No. 703-07-63, Part 2, furnishing washed gravel F.O.B. railroad cars at various sidings and washed gravel F.O.B. parish trucks at pit site: Items 1, 2 and 3, Meriwether Supply Corp., Shreveport, \$7,152; Items 4, 5 and 6, Braswell Sand and Gravel Co., Inc., Minden, \$1,804; Combined bid, \$8,957;

Calcasieu—State Project No. 703-07-65, furnishing and delivering clam shell stockpiled on bank of Calcasieu river at Westlake for use on certain public roads in Ward Four, Contract No. 2; W. T. Burton, Sulphur, \$1,760; only one bid received;

Pointe Coupee—State Project No. 703-07-68, furnishing washed gravel spot-dumped on certain public roads: Items 1, 2 and 3, Feliciana Sand and Gravel Co., Jackson, \$6,747; Items 4 and 5, Paul A. Lambert, Simmesport, \$2,723; Combined low bid, \$9,471;

Vermilion—State Project No. 703-07-77, furnishing washed gravel F.O.B. railroad cars at various destinations for use on certain public roads: Gifford Hill and Co., Inc., Alexandria, La., \$10,326;

Washington—State Project No. 703-07-78, Part 1, furnishing washed gravel and sand clay gravel (Grade B Modified) F.O.B. parish trucks for use on certain public roads: Item 1, G. Alton Knight, Franklinton, \$994; Item 2-A, Jules W. Core, Clifton, \$487; Item 2-B, P. H. Varnado, Mt. Hermon, \$327; Item 3, Charlie's Gravel Pit, Franklinton, \$3,275; Item 7, Woodrow W. Gerald, Franklinton, \$1,805; Item 8, G. Alton Knight, Franklinton, \$850; Charlie's Gravel Pit, Franklinton, \$850; Combined low bid, \$8,439;

Washington—State Project No. 703-07-78, Part 2, furnishing washed gravel spot-dumped on certain public roads in Ward 9: A. W. Burch, Mt. Hermon, \$810; Charlie's Gravel Pit, Franklinton, \$912; Standard Gravel Co., Franklinton, \$1,350.

## \$6,000,000 Ewin Project Rushed at Keesler Base

Ewin Engineering Corporation's \$6,000,000 construction contract at Keesler Air Force Base, Miss., is well underway. All buildings are under construction. These include a 98-room, two-story modern electronics laboratory, a 1000-man dining hall, and permanent type three-story barracks for 1900 men. Work is proceeding at an accelerated rate and all buildings are scheduled to be completed prior to July.

The mechanical sub-contract is being handled by Cotter Company of Jackson,

Miss. Estimated cost is \$1,370,280. Electrical contract is by G. R. Wood & Co., Inc. of Mobile, Ala. Estimated cost is \$571,000.

Other mechanical sub-contracts include Southern Roofing and Sheetmetal Co., Jackson, Miss., sheetmetal work, \$75,780; Water Cooling and Equipment Co., New Orleans, La., two cooling towers, \$16,268; Johnson Service Co., New Orleans, temperature controls, \$13,635, and Insulation Engineers, Inc., of New Orleans, insulation, \$15,960.

Other sub-contracts include J & B Manufacturing Co., Joseph H. Fox, Agent, Birmingham, Ala., to furnish, install and remove the metal pan framework, \$96,982; Independent Roofing Co., Mobile, roofing, \$76,162, and Clifford A. King of New Orleans, asphalt tile, \$3,112.

Material suppliers who have furnished major orders are—Radcliff Gravel Co., Mobile, \$34,837; Coast Materials Co., Gulfport, \$85,512; Joseph H. Fox, Birmingham, \$148,329; Faulkner Concrete Pipe, Gulfport, \$32,933; Smith Kelly Supply Co., Mobile, \$49,015; T. R. Miller Mill Co., Brewton, Ala., \$11,790; Calvert Lumber Co., Calvert, Ala., \$32,023; Contractors Materials Co., Jackson, \$23,149; Ray E. Loper Co., Bay Minette, Ala., \$14,443; and Meridian Wood Products Co., Meridian, \$12,175.

The project is being constructed under the direction of Col. W. K. Wilson, Jr., district engineer, Corps of Engineers, Mobile District, with Thomas C. Kemp as resident engineer, V. L. Taylor is project manager for Ewin Engineering Corp. also of Mobile.

## Westinghouse Awarded \$600,000 Contract

Plantation Pipe Line Co., operator of one of the world's largest pipe lines for refined petroleum products, has awarded a \$600,000 contract to the Westinghouse Electric Corp. for electrical equipment necessary for the expansion of the system.

C. R. Younts, president of the company, says that the contract provides for switchgear, motor starters, control centers, and ventilating fans. The additional equipment and pipe line will boost the capacity of the system from approximately 100,000 to 167,000 barrels per day.

The original pipe line, consisting of 12-inch and 10-inch pipe from Baton Rouge, La., to Greensboro, N. C., with lateral lines to Birmingham, Ala., Columbus and Macon, Ga., and Knoxville, Tenn., was constructed in 1941. The system, which filled a vital need during World War II, used Westinghouse equipment throughout for main pumping equipment at all of Plantation's 31 pumping stations.

Expansion of the system to provide for a parallel 180-inch line from Baton Rouge to Bremen, and a 14-inch line eastward to Charlotte, N. C., can be accomplished without addition of new motors.

"Twenty of the original 60 explosion resistant 600 to 900 horsepower Westinghouse motors will provide the additional horsepower necessary for the expanded activities of the line," Mr. Younts said.

Pumping stations on the present line are located at 30-mile intervals. With



expansion of the line, these intervals will be raised to 60 miles. Although this will reduce the present line's capacity from about 10,000 to 67,000 barrels per day, the extra meters, placed at 120-mile intervals on the new line, will provide that line with a 100,000-barrels-per-day capacity.

Mr. Younts reported that work on the new line began late in 1950 and will be completed the latter part of 1951. The expansion program will cost an estimated 52 million dollars.

Plantation Pipe Line Company is owned jointly by Standard Oil Co. (N. J.), Standard Oil Company (Ky.), and Shell Oil Co.

### C. A. Stoldt New Director of Oklahoma Highways



C. A. Stoldt

C. A. Stoldt has taken over the high command of the Oklahoma state highway department. He was named by the state highway commission on recommendation of Gov. Johnston Murray to succeed State Highway Director H. E. Bailey who resigned to become manager of the Turner Turnpike being constructed to link Oklahoma City and Tulsa.

A long-time Oklahoma resident and a civil engineer for 25 years, Mr. Stoldt resigned as project manager of the Arnold engineering center being built at Tullahoma, Tenn., by the U. S. Army Corps of Engineers to accept the highway directorship.

### St. Louis Contractors Attend National A.G.C. Convention

A number of representatives of the Associated General Contractors of St. Louis attended the 32nd annual convention of the A.G.C. of America, held in Boston last month. They included: John C. Bodine, Grantwood Contracting Co., president, St. Louis Chapter; Joseph E. Latta, Latta Construction Co., Missouri state director-elect in the heavy construction division; George H. Murch, Murch-Jarvis Construction Co., national advisory board member; Don C. Musick, Don C. Musick Construction Co., vice president of building division, A.G.C. of St. Louis; and Henry S. Till, manager, A.G.C. of St. Louis.

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## Roanoke Redeveloping Site for Low Cost Housing



Redevelopment authorities at Roanoke, Va., have received bids for a low rent housing project consisting of seventy-one resident buildings and a community and administration structure.

To be one and two stories high, the residence buildings will vary in size from three and one-half to six and one-half rooms. Altogether, they will contain three hundred dwelling units.

Architects for the project are Associated Housing Consultants, a firm composed of E. Paul Hayes, architect; Robert L. Brown & Associates, engineers and architects; Mattern & Mattern, engineers and A. A. Farnham, landscape architect.

According to J. G. Todd, of the architectural firm, the walls will be of the ten-inch cavity type, brick and cinder block, with interior partitions also of the latter material. Floors will be reinforced concrete.

The wooden trusses of the roof will be sheathed in work and covered with asphalt shingles. Double-hung windows will be installed. Doors will be wood in steel frames. The interior stairs will be wood, as will be the kitchen cabinets.

Buildings will be locally heated, except in a few cases where one heating plant will serve two buildings. Gas will be used to fuel the systems, which will be forced hot water through cast iron radiators.

Laundry rooms will be provided in some of the buildings. These will be of such size as to serve the entire project. Domestic hot water will be supplied by means of gas-fired storage heaters.

The community and administration building will contain the project offices, a complete clinic, a maintenance shop and an auditorium. Streets inside the boundaries will be paved with macadam. The walks will be concrete.

## America's Broadway Gets Big Face Lift Job

The biggest face lifting job ever attempted in Oklahoma on one highway at one time is in progress on U.S. 66, the Broadway of America.

A compilation of projects now in construction on the 356-mile route that enters the northeast part of the state from Missouri and travels southwest and west into the Texas Panhandle on its way to the Pacific coast, reveals that the Oklahoma State Highway Commission has \$9,265,000 contracts in operation.

According to C. A. Stoldt, new state highway director, all the work now in progress is scheduled to be completed this year.

The commission's 1951 program includes \$3,970,000 more improvements for the road, greater part of which was built in sections by counties during the knee pants days of the state before it got around to legislating a highway commission into existence.

Greater part of the improvements being made now and to be made are along the route where it enters the northeast part of the state down to Yukon, a distance of 217 miles where some of the 18-foot county built paving and 18-foot county built bridges and a lot of curves exist.

The narrow roadway is being widened and resurfaced to 24 feet.

Weary bridges are coming out and standard designed structures are being substituted.

Crooked roadway is being abandoned for new location and at one spot in Creek county five miles of new location eliminates 23 curves, the curviest section of the road in the state.

Where traffic is heaviest 4 lanes are being built.

Contracts now in operation, the contract prices and contractors follow:

Ottawa County—Commerce to Miami, 4 miles roadbed and paving, and 1.429 miles of 4-lane, \$700,000, Southwest General Construction Co., Dallas, Tex.;

Tulsa County—Circle east one mile 4-lane roadbed and paving, \$180,000, Layman & Sons, Tulsa;

Tulsa County—Fifty-first Street Arkansas river bridge, \$1,135,000, M. E. Gillioz, Monett, Mo.;

Tulsa County—Railway overpass near bridge, \$80,000, Duard Pyle, Oklahoma City;

Tulsa County—Earthwork approaches to 51st Street bridge, \$165,000, Tex Baughman Construction Co., Oklahoma City;

Tulsa County—Earthwork approaches to 51st Street bridge, \$165,000, Tex Baugh-

man Construction Co., Oklahoma City; paving approaches, \$140,000, Layman & Sons;

Tulsa County—Railway underpass near bridge, \$80,000, Duard Pyle, Oklahoma City;

Tulsa County—6.3 miles roadbed and bridges from 51st Street to Sapulpa, \$255,000, M. E. Gillioz; paving same, \$540,000, Dahlgren & Brooks, Oklahoma City;

Creek County—4.4 miles roadbed Sapulpa west, \$300,000, M. E. Gillioz; paving, \$305,000, Standard Paving Co., Tulsa; bridges, \$120,000, R. R. Tway Co., Inc., Oklahoma City;

Lincoln County—14.3 miles widening and resurfacing from Chandler west to Oklahoma City, \$550,000, Peter Kiewitt & Sons, Omaha, Nebr.;

Lincoln and Oklahoma Counties—2.8 miles roadbed and bridges at Deep Fork river bottoms (Lincoln county) and bridges at Luther and Arcadia (Oklahoma county), \$385,000, J. R. Raines;

Oklahoma County—2.8 miles roadbed and paving at Luther and Arcadia, \$150,000, Anchor Construction Co., Muskogee;

Oklahoma County—6.1 miles 4-lane roadbed, \$350,000, J. W. Moorman & Sons, Muskogee;

Oklahoma County—6.1 miles 4-lane roadbed, \$350,000, J. W. Moorman & Sons, Muskogee; paving, \$870,000, Steelman Construction Co., Oklahoma City; bridges, \$225,000, Boecking Construction Co., Oklahoma City. Also 1-6 miles 4-lane roadbed, \$300,000, Steelman company; paving, \$450,000, Steelman company; bridges, \$340,000, Baughman company; underpass, \$170,000, Steelman company;

Canadian County—6 miles 4-lane roadbed Yukon west, \$500,000, Noland Smith Construction Co., El Reno; paving, \$500,000, Dahlgren & Brooks; bridges, \$155,000, Amis Construction Co., Oklahoma City;

Beckham County—1.2 miles roadbed and paving, some 4-lane, \$220,000, Highway Contractors, Oklahoma City.

Projects and their estimated cost scheduled in the 1951 program are:

Rogers County—8 miles roadbed, widening, paving Claremore to Verdigris river \$940,000; 3 miles same type of construction, Catoosa to junction of S.H. 33, \$200,000;

Tulsa County—1.5 miles roadbed, paving from 51st Street to Turner turnpike, \$200,000; 2.5 miles roadbed, paving from 51st Street bridge to new U.S. 66, \$1,500,000;

Creek County—Railway overpass west of Sapulpa, \$100,000;

Lincoln County—Railway underpass near Warwick, \$30,000;

Oklahoma County—3 miles 4-lane roadbed, paving from Classen boulevard to May avenue, \$1,000,000.

## Texas Proposes Underpass At Texarkana

The State Highway Commission has made a proposal to Texarkana and the Kansas City Southern Railway to provide a new underpass on Boston Road.

Under the terms of the proposal the

(Continued on page 50)



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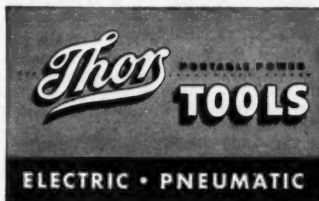
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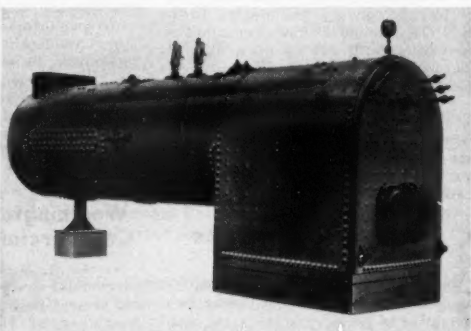
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## E. H. Cooper Retires

E. H. "Ed" Cooper, sales manager of Barber-Greene Company's Number 7 Area, (Louisiana, Texas, New Mexico, Oklahoma, Kansas, Colorado, and parts of Arkansas and Missouri) and a long-time familiar figure in Southwest construction circles, has retired.

He is succeeded by Charles H. Brumbaugh who had been assistant area sales manager.

Mr. Cooper came to Barber-Greene in 1924 and went to Florida to handle the



E. H. Cooper C. H. Brumbaugh

promotion of Barber-Greene ditchers during the building boom of the mid-twenties. Through his efforts, the B-G ditcher became well known for its ability to cut building foundations in coral rock.

Following his Florida sojourn, he became manager of Barber-Greene's Kansas City office, where he remained for several years, returning to Aurora to become head of the ditcher line sales and later Southern District sales manager. In 1945 he went to Dallas as sales manager of the Number 7 Area.

Mr. Brumbaugh came to Barber-Greene in 1941 with a broad background of experience in conveyor engineering. In the B-G organization he has specialized on conveyors, both at the main office at Aurora, Ill. and as a consultant in the New York City area.

Although officially in retirement, Mr. Cooper will continue to serve Barber-Greene customers in the Southwest as a special consultant on all lines. The Barber-Greene office will continue to be located in Dallas, Texas.

## Kentucky to Announce Purchases Awards

Purchase and contract awards for equipment and road construction will hereafter be posted publicly in the lobby of the Highway Department Division of Records, according to an official order signed by William P. Curlin, the new Kentucky Highway Commissioner. The action was taken following a conference with engineers and division directors concerned with maintenance and construction equipment. The Division of Records is located on the eighth floor of the New State Office Building, Frankfort.

The order also named a "certification committee" appointed to "study and recommend to the Department of Finance" all heavy equipment awards made in the future. The committee includes H. R. Creal, Assistant State Highway Engineer; Mitchell W. Tinder, Director of Records, and M. F. Johnson, Director of Maintenance. Both Creal and Johnson are fa-

miliar with all equipment needs and have served the department more than 26 years. Tinder has been head of the Records Division more than 20 years.

"The official order is a direct result of the request made by Governor Wetherby for a check-up on procedure in connection with equipment purchases," Mr. Curlin said. "While the policy of the department in the past has made all records available to the public, only those who were directly interested availed themselves of the opportunity to examine them. The public posting of awards and low bidders will permit easy access to these records by those concerned and give the public generally a chance to study all contracts."

"Recommendations with respect to award of heavy equipment contracts will follow the pattern observed for many years within the department regarding road construction contracts. A committee of engineers makes a careful study of bids and the qualification of bidders and recommends acceptance or rejection to the commissioner. In cases involving roads subject to Federal funds, the district engineer of the U. S. Bureau of Public Roads sits in on the conference. If the contract relates to maintenance, the director of that division is called in. The same procedure controls the award of rural or rural secondary contracts. Often both the Engineer-Deputy Commissioner of rural secondary roads and the Director of Rural Highways confer. The bids are studied as they are related to private estimates prepared by the Division of Design."

Executives and division directors who attended the commissioner's first staff conference included many engineers who have continuously served the department under from six to eight governors. The new commissioner, himself a career engineer, was pledged the support of the group by Dwight Bray, state highway engineer 30 years with the department, who has also been elevated to his present position from the ranks.

## Worthington Names Beck Commercial Vice President

Harold K. Beck has been appointed commercial vice president, in addition to his present post as manager of the Washington office of Worthington Pump and Machinery Corp., according to an announcement by W. H. Feldman, vice president in charge of sales.

Mr. Beck is a member of the American Society of Naval Engineers, Society of Naval Architects and Marine Engineers, U. S. Naval Institute, Washington Board of Trade, American Ordnance Association, Congressional Country Club, University Club and Delta Upsilon Fraternity. He makes his home at 9100 Burning Tree Road, Bradley Hills Grove, Bethesda, Md.



## Frank Sutton Joins Washington Firm

Frank Sutton, who has operated his own consulting engineering firm in New York for many years, has joined the staff of Guy B. Panero, Engineers, of New York and Washington.

Mr. Sutton has been responsible for the mechanical engineering design of many well-known institutional and commercial buildings throughout the United States. Two of his most recent projects are the agricultural engineering and animal husbandry buildings at Cornell University. Plans have been completed on both.

One of his best-known projects is the Jersey City Medical Center, for which his firm served as mechanical engineers throughout the construction program. During the past war, he was fully engaged in war projects and was associated on construction programs for Elco Naval Division of Electric Boat Co., Cities Service Refining Corp. and Fort Monmouth at Red Bank, N. J.

Mr. Sutton is a graduate of the School of Engineering at Columbia University. He is a member of the American Society of Mechanical Engineers and the American Society of Heating and Ventilating Engineers.

## Trans-Texas Highway Gap Award Made

The last remaining gap in a trans-Texas highway is being closed by the Texas Highway Department. The State Highway Commission has awarded the contract on a ten mile section of State Highway 24 east of Denton which will complete that highway from Paris in East Texas to Old Glory in West Texas.

D. C. Greer, state highway engineer, said completion of the highway should relieve congestion on other major east-west routes in north Texas. US Highways 80, 82 and 180 parallel State Highway 24.

According to the announcement, one north-south Texas route, State Highway 19, is now open from Sulphur Springs to Palestine. State Highway 19 is east of Dallas and parallels US Highway 75 and 175. US 75 and 175 have carried extremely heavy traffic for many years, and State 19 now offers an alternate route.

## Weirton Firm Uses 111-M for Stripping

Weirton Steel Corp., one of the nation's important steel producers, numbers among its valuable sources of coal supply a strip mine opened early this year near Uffington, West Virginia.

The mine is a stripping operation and is being worked by Weirton Construction Co. of Morgantown, W. Va., for National Mine Corp., a subsidiary of Weirton Steel.

To boost the output of the new mine, the construction concern purchased a Marion Type 111-M diesel long-range shovel equipped with a three-cubic-yard dipper and 45-foot boom. Working around the clock five days a week, the machine removes 45 feet of tough overburden to lay bare a 32-inch Upper Freeport coal seam.

(Continued on page 56)



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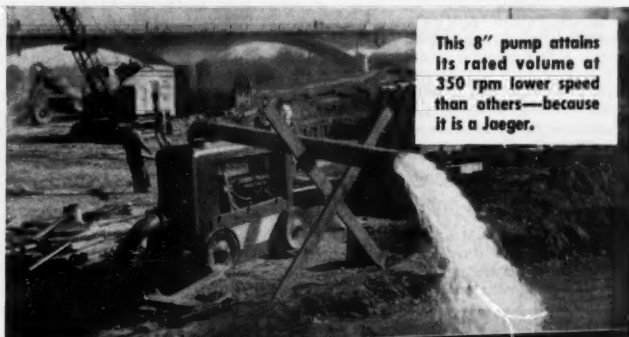
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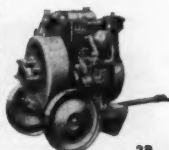
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## Weirton Firm Uses 111-M

(Continued from page 48)

Angelo S. Petitto, superintendent of the Uffington Mine, reports that "the machine is a nice machine and its performance is ideal. It is well balanced and has ample clearance." Mr. Petitto has been engaged in coal stripping and road construction work for 24 years and has been with Weirton Construction about two years.

Weirton Construction Co. recently placed an order for a second Marion shovel.

With the first 111-M as the key stripping unit and with other mine equipment such as three D8 Caterpillar bulldozers, two McCarthy drills (one vertical and one

horizontal) and a 215 Schram air compressor, Weirton Construction Co. is maintaining a steady flow of coal to the \$10,500,000 National Mine Corp. processing plant located near the Uffington pits. Coal is loaded seven and one-quarter hours a day, five days a week, and is transported to the plant by trucks.

After being processed, washed and sized in the plant, the coal is placed on a 2½-mile conveyor belt which takes it to the Monongahela River. Here, the coal is loaded on barges and shipped to the Weirton Steel Mills at Weirton, W. Va.

Weirton Construction Co. officials expect the Uffington stripping project to extend over the next six or seven years.

In addition to the Uffington job, Weirton is busy on several other coal-stripping

operations in West Virginia and Pennsylvania. President of the firm is Mike Starvaggi. Headquarters are at Box 851, Morgantown, W. Va.

## Texas Proposes Underpass

(Continued from page 46)

Highway Department would build the new 4-lane underpass, drainage and approaches if the city will furnish a clear 80-foot right of way. The city would also be required to provide right of way for a new railway, since the tracks would be shifted to the east and raised.

The proposed agreement calls for the railroad to assume responsibility for building the underpass if more than two rail tracks will use the structure. The rail company would also pay ten per cent of the cost of the structure in the event it may be built for two tracks.

Maintenance of the underpass would be the responsibility of the railroad.

The proposal of the Commission calls for its withdrawal unless accepted within 90 days. If accepted by the city and the railroad, the state highway engineer would proceed with plans for the structure.

## Metal Lath Makers Elect

(Continued from page 41)

neers Building, Cleveland 14, Ohio.

The Metal Lath Manufacturers' Association was formed many years ago for the purpose of promoting and encouraging the use of metal lath construction.

## Virginia Projects

(Continued from page 35)

**MARTINSVILLE** — Henry County plans sewage collection, disposal and Jones Creek interceptor, \$283,500.

**NORFOLK** — Navy Department plans aviation gasoline and jet fuel bulk storage (200,000 bbls.), NSC, \$1,550,000.

**NORFOLK** — Navy Department announced appropriation of \$3,150,000 for covered storage, Marine Corps Recruit Depot.

**NORFOLK** — Navy Department plans \$5,000,000 additional aviation facilities, Naval Air Station.

**NORFOLK** — Board of Education let contract to J. L. Smith, Portsmouth, \$340,000, for Abraham Lincoln School.

**NORFOLK** — Board of Education let contract to Doyle & Russell, \$921,695, for Westmont Avenue elementary school.

**NORFOLK** — Norfolk Redevelopment and Housing Authority received low bid from Dewey G. Weddle, \$949,000, for low rent housing project.

**RICHMOND** — Equitable Life Assurance Society of U. S. let contract to Doyle & Russell for office building, \$300,000.

**RICHMOND** — Department of Highways let contracts for projects in following counties:

**Chesterfield** — U. S. 1, making 4-lane divided approach road to Atlantic Coast Line underpass at Watball between Richmond and Petersburg; Asphalt Paving Service, Inc., Richmond, \$99,917.

**Fauquier** — U. S. 15-29, 3.86 mi. macadam pvt., A. B. Torrence & Co., Elkton, \$150,548.

**Henrico, Charles City** — Rt. 5, 4.75 mi. widening and reconstr. and 2 bridges; W. W. Tuck & Son, Virginia, \$145,681.

**Pittsylvania** — Sec. Rt. 640, 9.85 mi. reconstr. through Spring Garden; J. K. Spencer, Jr., Lynchburg, \$114,095.

**Princess Anne** — U. S. 58, 1.60 mi., 4-lane divided construction and 1 bridge continuing limited access Virginia Beach Blvd.; Ames & Webb, Inc., Norfolk, \$276,975.

**Bath** — Rt. 39, 130-ft. bridge across Thompson Creek, including approach roads; Echols Brothers, Staunton, \$66,399.

**RICHMOND** — Department of Highways received low bids for projects in following counties:

**Roanoke** — U. S. 220, overpass of Norfolk and Western Railroad; Harvey H. Stewart, Charlottesville, \$1,000,000.

(Continued on page 52)



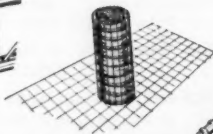
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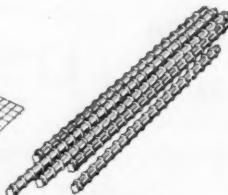
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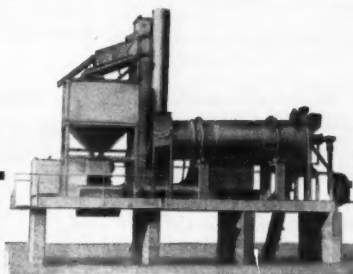
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Excellent for medium size city paving. Successful for contractors on all street and highway maintenance; for driveways, sidewalks, industrial plants.

Supplied with oil fired rotary dryer, batch mixer, bitumen heater, vibrating screen, divided hot bin, dust collector, volumetric measure or weigh scales; air control; engine or electric power.

Sizes: L-12, 12-15 tons per hour. Will pave 25' street, 2" thick, one 300' block per day. L-25, 25-30 tons per hour. Will cover 20' road, 1" thick, at 1/2-mile per day.

Also portable repair plants, 4 and 8 tons per hour.

Write for catalog and name of nearest dealer.

Elkhart **White Mfg. Co.** Indiana

## VIRGINIA PROJECTS

(Continued from page 30)

lotte, N. C., \$139,214;

**Allegheny**—U.S. 60, 607-ft. bridge and 0.83 mi. approach road; Ralph E. Mills Co., Inc., Salem, \$548,502;

**Norfolk and Princess Anne**—Rt. 165, conc. culvert and 0.14 mi. approach road at county line; Tidewater Construction Corp., Norfolk, \$53,559;

**Spotsylvania**—U.S. 1, 2.0 mi. stab. base for service road; T. F. Franklin, Salem, \$70,538;

**Prince Edward**—U.S. 15, 3.22 mi. macadam pvt.; A. W. Talbott, Buffalo Springs, \$123,584;

**Gloucester and York**—U.S. 17, 4.6 mi. conc. pvt. and bridge over Park Tours Rd. at Yorktown, forming approaches to York River bridge; W. H. Scott, Franklin, \$490,312;

**Louisa**—Sec. Rt. 656, 2.41 mi. hard-surf. and 44-ft. bridge from Fredericks Hall south; E. W. Woolfolk, Hopewell, \$72,917;

**Wythe**—Sec. Rts. 690, 642 and 619, 3.68 mi. hard-surf.; Pendleton Construction Corp., Wytheville, \$60,434;

**RICHMOND**—Department of Highways received low bid from J. Kennon Perrin, \$68,381, for widen, overpass and approaches over R. F. & P. Railroad, Rt. 147;

**STANTON**—Board of Education let contract to C. W. Barger & Son, Lexington, \$387,877, for 15-classroom elementary school;

**Warwick County**—County School Board let contract to Endeavour-White Construction Co., Hilton Village, \$337,000, for Riverside Elementary School;

**WILLIAMSBURG**—William and Mary College received low bid from Graham Brothers, Richmond, \$439,200, for dormitory building;

**YORKTOWN**—Navy Department plans conversion of TNT loading line to aluminized explosive loading; Naval Mine Depot, \$1,025,000.

## WEST VIRGINIA

**CHARLESTON**—State Road Commission received low bids for projects in following counties:

**Kanawha**—Proj. 3813-B, Morris Bridge No. 1375; Pochontas Construction Co., Lewisburg, \$32,249;

**Kanawha**—Proj. 3813-B, Upper Creek Bridge No. 1376; Wallace Construction Co., Huntington, \$47,572;

**Logan**—Proj. U-296(4), Dingess St. Bridge No. 1814; J. M. Francesca & Co., Fayetteville, \$329,081;

**Kanawha**—Proj. FU-290(3), Charleston Tyler Creek Rd., 2.052 mi.; Charleston Construction and Howard Price Co., \$394,738.

**HUNTINGTON**—Chesapeake and Ohio Railway, Richmond, Va., let contract to S. N. Nielsen Co., Chicago, Ill., for \$465,000 diesel engine shop.

**MORGANTOWN**—West Virginia University let contract to Baker & Combs, Inc., \$1,490,000, for physics building.

**NEW HAVEN**—Vanadium Corp. of America plans \$7,000,000 plant for silicon alloys near New Haven in Mason County.

## Southern Construction

(Continued from page 16)

situation are clarified."

The Department of Labor at the middle of February said homebuilding continued at a brisk pace in January, with \$7,000 new permanent non-farm dwelling units started. The level was placed eight per cent below that for December. Privately owned new housing starts were reported up by five per cent. Public housing was down.

The National Association of Real Es-

tate Boards, however, declared that an artificial housing shortage is being created through unnecessary regulations to build up demand for government housing. "Housing needed in any area of the United States today," said the head of that organization, "can be had quickly and at no cost to the taxpayer if government agencies will relax controls in those areas and permit the use of materials while they are still available."

The National Association of Home Builders urged relaxation of Regulation X in defense areas to spur production of homes; Federal Housing Administration insurance up to ninety per cent in such areas; mortgage insurance for loans on rental mobile or demountable housing and financial assistance to provide utilities or community facilities in defense areas where local governments are unable to furnish such aid.

## INDUSTRIAL

February, 1951

	Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951
Ala. ....	\$19,790,000	\$17,998,000	\$63,571,000
Ark. ....	5,350,000	2,560,000	5,600,000
D. C. ....	951,000	9,780,000	3,221,000
Fla. ....	4,845,000	63,000	5,172,000
Ga. ....	90,840,000	93,165,000	95,176,000
La. ....	76,276,000	15,862,000	77,011,000
Md. ....	1,196,000	6,000,000	3,773,000
Miss. ....	9,195,000	8,303,000	19,544,000
Mo. ....	512,000	5,150,000	7,012,000
N. C. ....	9,050,000	40,050,000	9,350,000
Okla. ....	14,563,000	5,341,000	368,117,000
S. C. ....	2,735,000	25,700,000	5,985,000
Tenn. ....	119,916,000	22,155,000	138,472,000
Tex. ....	20,600,000	3,050,000	21,734,000
W. Va. ....	465,000	16,700,000	22,265,000

TOTAL \$377,384,000 \$272,537,000 \$1,198,003,000

## PUBLIC BUILDING

(City, County, State, Federal; Schools)

February, 1951

	Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951
Ala. ....	\$ 4,218,000	\$ 5,540,000	\$ 5,566,000
Ark. ....	338,000	1,540,000	885,000
D. C. ....	1,355,000	920,000	3,920,000
Fla. ....	10,495,000	4,039,000	13,754,000
Ga. ....	1,386,000	4,863,000	2,322,000
Ky. ....	1,264,000	1,884,000	3,341,000
La. ....	8,876,000	4,850,000	11,089,000
Md. ....	8,038,000	3,790,000	28,227,000
Miss. ....	1,889,000	2,975,000	2,952,000
Mo. ....	2,244,000	29,608,000	2,979,000
N. C. ....	6,898,000	7,070,000	13,018,000
Okla. ....	3,430,000	133,000	4,502,000
S. C. ....	3,645,000	2,939,000	4,553,000
Tenn. ....	3,952,000	2,055,000	5,064,000
Tex. ....	12,256,000	20,062,000	22,355,000
Va. ....	6,313,000	6,820,000	9,808,000
W. Va. ....	2,900,000	200,000	2,900,000

TOTAL \$81,475,000 \$100,400,000 \$137,355,000

## PRIVATE BUILDING

(Assembly, Commercial, Residential, Office)  
February, 1951

	Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951
Ala. ....	\$ 1,343,000	\$ 6,130,000	\$ 8,707,000
Ark. ....	1,100,000	2,075,000	5,576,000
D. C. ....	5,000	330,000	5,000
Fla. ....	10,659,000	5,799,000	18,923,000
Ga. ....	540,000	3,354,000	9,690,000
Ky. ....	8,084,000	2,875,000	9,984,000
La. ....	20,597,000	3,440,000	26,034,000
Md. ....	5,338,000	1,950,000	15,070,000
Miss. ....	6,122,000	1,080,000	7,206,000
Mo. ....	610,000	4,125,000	41,077,000
N. C. ....	238,000	2,300,000	5,910,000
Okla. ....	1,850,000	500,000	500,000
S. C. ....	2,045,000	2,550,000	841,000
Tenn. ....	2,045,000	1,210,000	22,583,000
Tex. ....	17,943,000	48,805,000	41,784,000
Va. ....	2,154,000	2,580,000	9,056,000
W. Va. ....	.....	.....	.....

TOTAL \$76,777,000 \$87,578,000 \$221,448,000

## PUBLIC ENGINEERING

(Dams, Drainage, Waterworks, Sewers, etc.)

February, 1951

	Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951
Ala. ....	\$12,037,000	\$ 5,264,000	\$15,479,000
Ark. ....	1,687,000	1,100,000	1,587,000
D. C. ....	79,000	685,000	104,000
Fla. ....	12,042,000	46,773,000	17,492,000
Ga. ....	2,123,000	104,314,000	3,642,000
Ky. ....	2,052,000	1,382,000	1,382,000
La. ....	1,176,000	31,790,000	1,832,000
Md. ....	3,564,000	37,500,000	4,758,000
Miss. ....	1,300,000	8,437,000	1,700,000
N. C. ....	114,000	3,650,000	125,000
Okla. ....	1,294,000	6,242,000	2,004,000
S. C. ....	305,000	1,541,000	838,000
Tenn. ....	5,777,000	8,419,000	6,790,000
Tex. ....	15,599,000	146,297,000	24,773,000
Va. ....	558,000	15,501,000	683,000
W. Va. ....	.....	.....	.....

TOTAL \$59,667,000 \$421,725,000 \$85,452,000

## ROADS, STREETS, BRIDGES

February, 1951

	Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Two Months 1951
Ala. ....	\$ 1,347,000	\$ 3,120,000	\$ 6,013,000
Ark. ....	4,800,000	4,800,000	4,800,000
D. C. ....	134,000	60,000	134,000
Fla. ....	11,918,000	2,512,000	14,436,000
Ga. ....	3,906,000	1,140,000	3,906,000
Ky. ....	5,777,000	950,000	950,000
La. ....	1,697,000	24,155,000	7,406,000
Md. ....	1,907,000	2,118,000	5,764,000
Miss. ....	3,681,000	1,680,000	3,246,000
Mo. ....	3,736,000	3,450,000	3,736,000
N. C. ....	2,584,000	504,000	6,958,000
Okla. ....	1,432,000	1,554,000	2,436,000
S. C. ....	1,314,000	610,000	6,583,000
Tenn. ....	5,777,000	8,419,000	2,790,000
Tex. ....	10,387,000	12,321,000	14,288,000
Va. ....	1,735,000	52,310,000	3,001,000
W. Va. ....	1,358,000	10,000,000	1,358,000

TOTAL \$46,561,000 \$121,144,000 \$82,075,000

Peak Intake  
Test  
Boreholes  
& Grouting

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Grafton, West Virginia



## A.S.G.E. Holds Meeting at Houston, Texas

(Continued from page 5)

five set-ups were required for the placing of one tunnel tube.

Mr. Heagy urged a definite long-range plan for disposing of the dredge spoil before further improvement of the Houston Ship Channel is undertaken.

Cableways will "not always" fit your construction job, declared Mr. Tripp. "Many construction projects do lend themselves to the use of cableways," he said, "such as long cuts and adjacent fills, graving docks, deep quarries, sewage disposal plants, penstocks and isolated high structures such as dams and bridges."

"Low long dams can sometimes be built economically by trestles and cranes but if a deep stream must be diverted during construction and the gap then closed, a cableway may be a 'must' selection."

Heavy duty spans of over 2700 feet are uneconomical. A standard 25-ton cableway with bucket traveling a distance of 500 feet at 1250 feet per minute and hoisting at 350 feet per minute can be counted on to deliver the capacity of two 4 cubic yard mixers. One such cableway can handle a 400,000 cubic yard job provided it covers the work, by servicing the job during one shift and pouring during two.

Another cableway should be added for each increment of 400,000 cubic yards in the job. On very large jobs the overall time allowed to finish a job controls the number of cableways required based on average production of 65% of the above capacity.

If destructive forces are released on our large cities such as an atom bomb, casualties will range from 40,000 to 120,000 persons stated Commander Marsh. "This possible saving of 40,000 lives indicates why such great emphasis is placed on civil defense planning. An effective basic disaster plan will do much to save lives, alleviate suffering, reduce damage, and provide essential services. A basic plan requires: a) detailed planning of tasks for maximum use of personnel, material and equipment; b) a complete logistical study of all supplies needed; and c) trustworthy mutual aid agreements."

Savings accruing to the users of the proposed Houston Urban Expressway are estimated to equal the cost of the facility in less than 10 years, and to be greater than on the Gulf Freeway, according to Mr. Van London. "The Expressway section would cost \$5,000,000 per mile, and the entrance and exist ramps would cost an additional \$3,500,000 per mile for a total of about \$8,500,000 for the area." When and where the money would come from, the speaker did not know.

To correct a few popular misconceptions of urban expressways, Mr. Van London pointed out that although expressways usually connect with highways at the outer limits of the urban areas, expressways are not designed primarily for traffic passing through cities.

Careful studies reveal that only 6 per cent of the traffic using expressways in Houston would be through highway traf-

fic. Likewise, expressways are not dreamways for joy riders, as is popularly believed.

The annual damage of marine borers to waterfront structures in this country alone totals many, many millions of dollars. Yet, the same mistakes in design are made over and over again, while the investigations and research about marine borers has been spasmodic and limited, stated Admiral Jelley in urging greater effort in the marine borer research. "Design of timber waterfront structures," the Admiral continued, "is still one branch of engineering where the rule of thumb still prevails."

"Radar is now being used to detect, track and quantitatively measure rainfall over the northern half of Illinois." This unique use of radar was described in a technical paper presented by Messrs. Hudson, Stout and Huff. In presenting their paper the authors pointed out that "Present rain-gaging techniques do not provide the accuracy required by engineers and meteorologists."

### GRAY CONCRETE PIPE CO.

MANUFACTURERS PLAIN AND REINFORCED  
SEWER AND CULVERT PIPE  
ALL SIZES FOR ALL PURPOSES

PLANTS: Thomasville, N. C., Phone 455, 419;  
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**CONVEYOR** — 26" x 50-0" Flat Belt, no Flare Boards, Center Drive, Idlers on 6" centers with 3 Horsepower 3-60-220 Volt Motor, Steel Box Frame. Weight—3900 lbs. Price—\$2,000.

**DRAVO-BOYLE CO.**

2601 Preble Ave., Pittsburgh 33, Pa.

### Equipment Values!

**Traxcavator** — "Caterpillar" Diesel D4, #736196WSP, with 1 yd., 73" bucket. Checked over, cleaned and painted. Ready for hard jobs. FOB Ashland, Ky. \$3,350.00

**Tractor-Dozer** — Caterpillar Diesel D6, #80666. A 65 d.b. HP tractor with new Caterpillar No. 23 c.e.u., new 6S dozer, crankcase guard, pull hook, large idlers, electric starter, battery and generator. Late 1947 tractor, completely gone over at cost of over \$5,000.00. FOB Louisville. \$9,350.00

**Tractor-Dozer** — Caterpillar Diesel D6, #90461. A 65 d.b. HP tractor with LeTourneau straight tilt dozer, LeTourneau DDPCU, crankcase guard, pull hook, large idlers, heavy duty equalizer spring and 18" shoes. Good looking, good running, late model D6. FOB Ashland, Ky. \$7,850.00

**Mixer** — Jaeger, model 11EL, 2-bag, mounted on 2 pneumatic tires. A little over a year old. A real buy. FOB Louisville. \$1,475.00

**Motor Grader** — Caterpillar Diesel No. 12, #9K163, with scarifier but no cab. Put in good shape by our shop, resembles a new machine. Good tires. FOB Louisville. \$7,850.00

**Generator Set** — Caterpillar D13000, #2V5143, 83 KW, with blower fan, radiator arrangement, safety device, thermometer. Used 49 days. Save \$1,000.00 FOB Louisville. \$8,435.00

**ROY C. WHAYNE**  
SUPPLY CO.

800 W. MAIN ST., LOUISVILLE, KY.

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1 Allis-Chalmers Generator, 350 Volts, 715 Amps, 1200 RPM, Serial No. 132379.

1 Allis-Chalmers Type E B 120 D. C. Exciter, Shunt Wound, 15-KW, 120 Amps, 125 Volts, 800 to 1200 RPM, Serial No. 3196CK-120DEB-1-1.

1 Allis-Chalmers 300 HP, 350 Volts, 1000 RPM, 699 1 hour or 520 Cont. Svc. Drawworks Motor Serial No. 132452.

1 Allis-Chalmers Type EM-2 Switchboard Complete (Serial No. 3X5334) with Cutler-Hammer Control (Serial No. B106711) with all Cables and (1) 1 1/4 HP DC Compound Wound Blower Motor, 10 Amps, 125 Volts, 1800 RPM, Serial No. 9076MK-SIDE-1.

Price f.o.b. Hobbs, New Mexico.

**\$7500.00**

1 Caterpillar Diesel Electric Set, No. 34-15-S, 21-KW, With 3 1/2" Bore x 5" Stroke Caterpillar Diesel Motor, with skids and roof.

Price f.o.b. Hobbs, New Mexico.

**\$3000.00**

All this equipment in A-1 Operating Condition.

**MAKIN DRILLING CO.**

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Cleaned, crushed, screened and sized for athletic running tracks and cinder concrete. Track topping furnished with clay binder. Red burned shale driveway and road topping.

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**Block Machine for Sale**

Buy the pallets and get the machine free. Now running, until larger machine arrives.

**D. W. HOUTS & SON, Inc.**

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### DEPENDABLE USED MACHINES

Browning 20 ton erectors crane  
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Rebuilt vibrating screens, various sizes  
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<b>CONCRETE SURFACING MACHINERY CO.</b> — CONSTRUCTION EQUIPMENT CO. (Alabama State Section) ..... 14G CONSTRUCTORS SUPPLY CO., INC. (North Carolina State Section) ..... 14F CONTRACTORS EQUIPMENT CO. (West Virginia State Section) ..... 14D CONTRACTORS SERVICE, INC. (North Carolina State Section) ..... 14F CORSON CO., INC. (Virginia Section) ..... 14E CRAVEN CO., E. F. (North Carolina State Section) ..... 14C CUMBERLAND PORTLAND CEMENT CO. .... 43 Agency—George H. Hartman Co.	<b>LITTLEFORD BROS., INC.</b> ..... — Agency—Jean-Or Co.	<b>TRACTOR &amp; EQUIPMENT COMPANY</b> ..... 53 TRACTOR & MACHINERY CO., INC. (Georgia State Section) ..... 14B TRI-STATE, INC. (Georgia State Section) ..... — Agency—Charles A. Rawson & Associates
<b>DETROIT DIESEL ENGINE DIV.—G. M. Corp.</b> — Agency—Kudner Agency, Inc.	<b>LOUIS CO., INC., JOHN C.</b> (Md.-D. C. Section) ..... 47 LUCY BOILER & MFG. CORP. .... 47 Agency—Power & Condon	<b>TRI-STATE TRACTOR CO.</b> (Georgia State Section) ..... 14A Agency—Charles A. Rawson & Associates
<b>DICKY CLAY MANUFACTURING CO., W. S.</b> — Agency—Robertson & Buckley, Inc.	<b>MACIN DRILLING CO.</b> ..... 53 M & G ARMATURE & GENERATOR SERVICE, INC. (Maryland-D. C. Section) ..... 14H MARION POWER SHOVEL CO. .... 4 McCANN STEEL CO. (Tenn. State Section) 14E McGAN PATENT SCAFFOLDING CO. (Md.-D. C. Section) ..... 14A MINE & CONTRACTORS SUPPLY CO. .... 12 MITCHELL DISTRIBUTING CO. (North Carolina State Section) ..... 14E Agency—Andrews Agency, Inc.	<b>TUCKER STEEL CORP.</b> (Kentucky & Tennessee State Sections) ..... 14H TWIN STATES EQUIPMENT CO. (North Carolina & South Carolina State Sections) ..... 14B TYRONE ROCK PRODUCTS CO. (Georgia State Section) ..... 14D
<b>DIERICH BROS., INC.</b> (Maryland, North Carolina & Virginia State Sections) .... 14 Agency—H. W. Buddemeier Co.	<b>MOTT CORE DRILLING COMPANY</b> ..... 52	<b>UNIVERSAL FORM CLAMP CO.</b> ..... 19 Agency—Ross Llewellyn, Inc.
<b>DRAVO-BOYLE COMPANY</b> ..... 53 Agency—Ketchum, McLeod & Grove, Inc.	<b>NORTH CAROLINA EQUIP. CO.</b> (North Carolina State Section) ..... 3 NORTHWEST ENGINEERING COMPANY ..... 3 Agency—Russell T. Gray, Inc.	<b>VANDAVEE, H. C.</b> ..... 53 VAN LOTT, INC. (South Carolina State Section) ..... 13 Agency—Cox Advertising
<b>ECONOMY FORMS COMPANY</b> ..... — Agency—The Blakemore Company	<b>NEFF-THOMAS MCHY., INC.</b> (Florida State Section) ..... 14D NORTH CAROLINA EQUIP. CO. (North Carolina State Section) ..... 3 NORTHWEST ENGINEERING COMPANY ..... 3 Agency—Russell T. Gray, Inc.	<b>VIRGINIA BRIDGE COMPANY</b> ..... 8 VIRGINIA ENGINEERING CO., INC. .... 52
<b>ELPHINSTONE, INC. (Md.-D. C. Section)</b> .. 14A	<b>OCONEE CLAY PRODUCTS CO.</b> (Alabama, Florida, Kentucky, South Carolina, Tennessee State Sections) ..... — Agency—Mfr's. Promotional Service	<b>WELLMAN ENGINEERING CO.</b> ..... 51 Agency—Grissold-Eshleman Co.
<b>FLEX-PLANE</b> ..... — Agency—Meek & Thomas, Inc.	<b>OSBORNE EQUIP. CO.</b> (Tenn. State Section) 14 OSGOOD CO. (Louisiana & Tennessee State Sections) .. — Agency—Howard Swink Advtg. Agency.	<b>WHAYNE SUPPLY CO., ROY C.</b> ..... 53 Agency—Zimmer-McClaskey Advertising Agency
<b>FLORIDA EQUIPMENT CO.</b> (Florida State Section) ..... — Agency—Andrews Agency, Inc.	<b>PARK TRACTOR CO., GEORGE</b> (Georgia State Section) ..... 146	<b>WHITE MANUFACTURING COMPANY</b> ..... 51
<b>FLORIDA-GEORGIA TRACTOR CO.</b> (Florida & Georgia State Sections) ..... — FOOTE COMPANY, INC. .... — Agency—Russell T. Gray, Inc.	<b>PARSONS CO.</b> (Kentucky, Maryland, Missouri, Oklahoma, Tennessee, Virginia & West Virginia State Sections) ..... 148, 14C Agency—Andrews Agency, Inc.	<b>YANCEY BROTHERS CO.</b> (Georgia State Section) ..... 13 Agency—Robert H. Scott
<b>GALION IRON WORKS &amp; MFG. CO.</b> ..... — Agency—Morgan Advertising Co.	<b>POULAN SAW CO.</b> ..... — Agency—Bozell & Jacobs	
<b>GARDNER-DENVER EQUIPMENT CO.</b> ..... — Agency—The Buchen Company	<b>POWER EQUIP. CO.</b> (North Carolina State Section) ..... 14D POWER EQUIP. CO. (Tenn. State Section) 12	
<b>G. M. CORP.—DETROIT DIESEL ENG. DIV.</b> — Agency—Kudner Agency, Inc.	<b>QUICK-WAY TRUCK SHOVEL COMPANY</b> 10 Agency—Shaw-Shump Advtg. Agency	
<b>GENERAL SUPPLY &amp; EQUIP. CO.</b> (Maryland-D. C. Section) ..... — Agency—Edward W. Robotham Co.	<b>RISH EQUIPMENT CO.</b> (Virginia & West Virginia Sections) ..... 13 ROSCO MFG. CO. (Kentucky State Section) .. — Agency—Foulke Agency, Inc.	
<b>GIBBS CORP.</b> (Florida State Section) ..... 14C Agency—Hosler Advertising, Inc.	<b>SALEM FOUNDRY &amp; MACHINE WORKS</b> .... 51 SEABROOK TRUCK & TRACTOR CO. (Florida State Section) ..... 14 SERVICE SUPPLY CORP. (Md.-D. C. & Virginia State Sections) ..... 14A SHELLY TRACTOR & EQUIP. CO. (Florida State Section) ..... 14C Agency—Hosler Advertising, Inc.	
<b>GILL EQUIPMENT CO.</b> (Georgia State Section) ..... 14E	<b>SHUNK MFG. CO.</b> ..... 49 Agency—Morgan Advertising Co.	

# Put safety and reliability into your boom supports

*with new Fatigue-Resistant*

## TIGER BRAND WIRE

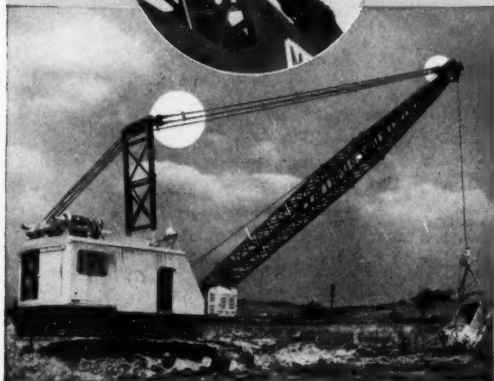
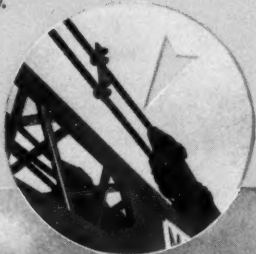
.....► An exclusive development of

## ROPE ASSEMBLIES

American Steel and Wire Company

### HERE'S THE TROUBLE SPOT

On old style boom supports, vibration was concentrated at the point where the wire rope entered the socket. For machines where vibration was not severe, this assembly was satisfactory. But for today's high-power, high-speed machines, a boom support with much greater resistance to fatigue is absolutely necessary.



AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO  
COLUMBIA STEEL COMPANY, SAN FRANCISCO  
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM  
SOUTHERN DISTRIBUTORS  
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



## AMERICAN TIGER BRAND WIRE ROPE

*Excellay Preformed*

UNITED STATES STEEL



### HOW THE TROUBLE WAS ELIMINATED

The New Fatigue-Resistant Tiger Brand Wire Rope Assemblies are an innovation. They effectively combat the most severe vibration on power shovels, draglines and cranes. Note carefully the novel end thimble interwoven into the pendant. Vibration is dampened over a long section instead of being concentrated at one point.

### 2 TO 3 TIMES LONGER LIFE

The new construction has been proved in actual operation to last two to three times longer than the old assemblies — and in some cases even better results were obtained.

### INTERCHANGEABLE ON STANDARD EQUIPMENT

You can replace your old boom supports with these new assemblies quickly and easily because essential dimensions such as pin diameters, distance between ears, etc. are the same as for standard open and closed sockets. Send the coupon for complete information.

American Steel & Wire Company  
Rockefeller Building, Dept. Y-81  
Cleveland 13, Ohio

Please send me complete information on your new Tiger Brand Boom Support Assemblies.

Name.....  
Title.....  
Company.....  
Address.....  
City..... State.....



No matter how you say it  
*It Comes Out the Same*  
 Last Year—This Year—Next Year

in 1940  
 we said



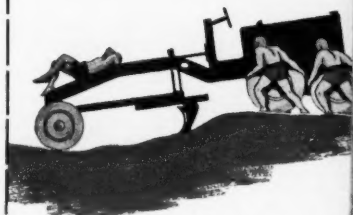
A motor grader without power on the front wheels is like a horse with roller skates on his front feet.

in 1945  
 we said

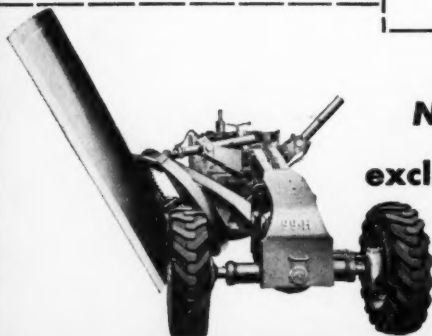


It's not in the cards for a grader with rear drive to equal the performance of one with All-Wheel Drive.

in 1950  
 we said



Don't handicap your horsepower! No grader with a dead front end can possibly deliver maximum power-at-the-blade.



No two ways about it! Austin-Western's exclusive All-Wheel Drive goes more places... does more things... moves more material, farther and faster.

AUSTIN-WESTERN COMPANY, AURORA, ILL., U. S. A.

**Austin Western**

